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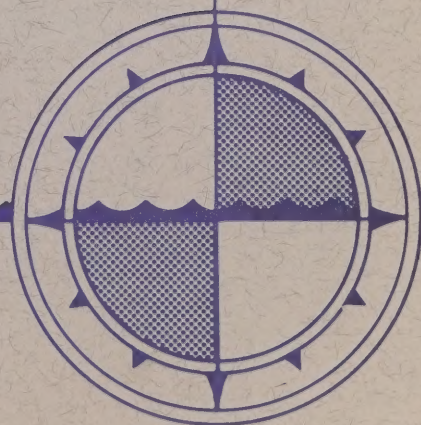
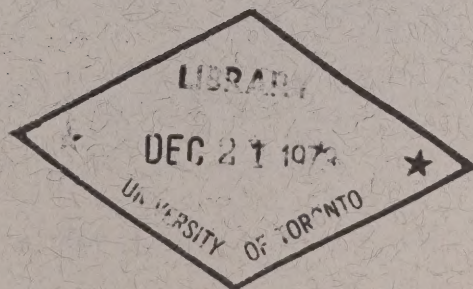
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PACIFIC MARINE SCIENCE REPORT 71-5

**OCEANOGRAPHIC OBSERVATIONS AT  
OCEAN STATION P (50°N, 145°W)  
VOLUME 46  
May 15 - July 1, 1970**

**B. Minkley**



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**Department of the Environment  
Marine Sciences Branch  
Pacific Region  
512 Federal Bldg  
Victoria, B.C.**







## MARINE SCIENCES BRANCH, PACIFIC REGION

## PACIFIC MARINE SCIENCE REPORT NO. 71-5

## OCEANOGRAPHIC OBSERVATIONS AT OCEAN STATION P (50°N, 145°W)

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by

B. MINKLEY

Marine Sciences Branch  
Department of the Environment





## INTRODUCTION

Canadian operation of Ocean Weather Station P (latitude 50°00'N, longitude 145°00'W) was inaugurated in December, 1950. The station is manned by two vessels operated by the Marine Services Branch of the Department of Transport. They are the CCGS VANCOUVER and the CCGS QUADRA. Each ship remains on station for a period of six weeks, and is then relieved by the alternative ship, thus maintaining a continuous watch. The chief purpose of the station is to operate as a meteorological station for surface and upper-air observations and as an air-sea rescue station.

Bathythermograph observations have been made at Station P since July, 1952. A program of more extensive oceanographic observations was commenced in August, 1956. This was further extended in April, 1959, by the addition of a series of oceanographic stations along the route to and from Station P and Swiftsure Bank. These stations are known as Line P stations. The number of stations on Line P has been increased twice and now consists of twelve stations (Fig. 1). Bathythermograph observations and surface salinity sample collections in addition to being made on Line P oceanographic stations are also made at odd meridians at 40' i.e. 139°40'W, 141°40'W, etc. Data observed prior to 1968 has been indexed by Collins et al, (1969).

The present record includes hydrographic data and salinity-temperature-pressure data collected from the QUADRA during the period May 15 to July 1, 1970. Mechanical and Expendable bathythermograph traces obtained on this cruise are available on IBM microfiche cards and will be available in digitized format on magnetic tape in the near future.

All physical data has been archived by the Canadian Oceanographic Data Centre (CODC), 615 Booth Street, Ottawa, Ontario, Canada. Requests for these data should be directed to CODC.

Biological and productivity data are published in the Manuscript Report series of the Fisheries Research Board of Canada (FRB), The Biological Station, Nanaimo, B.C., Canada. Requests for these data should be directed to FRB.

Bird observations are sent to Dr. M. Myres, University of Calgary, Calgary, Alberta, Canada; and Marine Mammal observations to Mr. I. McAskie, Fisheries Research Board of Canada, The Biological Station, Nanaimo, B.C. Canada. Requests for information on the air-sea interaction studies should be made to Mr. K. Denman, Institute of Oceanography, University of British Columbia, Vancouver 8, B. C. Canada.

Program of observations from CCGS VANCOUVER, May 15 to July 1, 1970  
(P-70-4) (CODC Ref. No. 02-70-004)

Oceanographic observations were made by Mr. B. Minkley of the Department of the Environment, Marine Sciences Branch, Messrs. K. Denman and R. Johnston of the Institute of Oceanography, University of



British Columbia carried out a program of air-sea interaction studies and assisted in the regular weathership data gathering program.

Enroute to Station P, stations 1 through 12 were occupied. A Bisset-Berman 9040 STD was used to obtain continuous temperature and salinity records from the surface to (approximately) 1500 meters. At stations 4 and 9 sample depths were extended to 2400 meters and 3500 meters respectively with Nansen Bottles. Each STD station was accompanied by a mechanical BT cast to 275 meters and the collection of a surface salinity and nitrate sample. All Line P BT Stations were also occupied.

On Station P profiles of salinity, temperature and oxygen were obtained as follows:

- 1) Weekly Nansen bottle casts to near bottom (4200 meters).
- 11) STP casts to 1500 meters immediately after each Nansen bottle cast.
- 111) 300 meter STP casts twice weekly.
- 1V) Mechanical BT casts were made 8 times daily and a bucket salinity sample was taken each day at 0000 hours GMT.
- V) STP casts were made twice daily to sample the depth of the thermocline and during rough weather repeated STP casts to 150 m were made to study the internal wave structure.
- VI) Three XBT time series studies at hourly intervals were made to study the thermocline. The data described in Sections V and VI were obtained for the air-sea-interaction studies of Mr. K. Denman of the Institute of Oceanography, University of British Columbia.

Other observations made and data obtained at Station P were as follows:

A Gill vertical and horizontal anemometer, a sonic anemometer and a thermistor and dew point hydrometer were mounted on the ship's main mast for the meteorological sampling of the air-sea interaction studies. This data and data from a vertical accelerometer, gyro and the ship's wave recorder were recorded on magnetic tape.

Vertical zooplankton hauls from 150 m depth were made daily on station, weather permitting, and from 1200 m twice during the patrol. Two 10 minute horizontal plankton hauls were made during this patrol. Ocean productivity measurements of photosynthesis rate ( $C_{14}$  method) and plant pigment concentration were made at frequent intervals during the survey.



Duplicate air samples for carbon dioxide analysis were collected weekly on station.

Bird observations were made three times daily and a marine mammal log was kept.

En route from Station P, stations 6 through 1 were occupied. Each station consisted of a STP cast, a mechanical BT cast and the collection of a surface salinity and nitrate sample. All Line P BT Stations were occupied.

Please Note: Station numbers are arranged in two separate series, Hydrographic and STD. The station numbers are in chronological order but are not consecutively numbered.

The data for this technical report was processed by Messrs. D. A. Healey, B. Minkley and D. Smith, and assembled and edited for publication by Mr. K. Abbott-Smith.

### Observational Procedures

Temperatures at depth were measured by deep-sea reversing thermometers of German (Richter and Wiese) or Japanese (Yoshino Keiki Co.) manufacture. Two protected thermometers were used on all Nansen bottles, and one unprotected thermometer was used on each bottle at depths of 300 m or greater. The accuracy of protected reversing thermometers is believed to be  $\pm 0.02^\circ\text{C}$ .

Surface water temperature were measured from a bucket sample using a deck thermometer of  $\pm 0.1^\circ\text{C}$  accuracy.

Salinity determinations were made partly at sea and partly ashore using an Autolab Model 601 Mark III Inductive Salinometer. Accuracy using duplicate determinations is estimated to be  $\pm 0.003$  ppt.

Depth determinations were made using the "depth difference" method described in the U.S.N. Hydrographic Office Publication No. 607 (1955). Depth estimates have an approximate accuracy of  $\pm 5$  m for depths less than 1000 m, and  $\pm 0.5\%$  of depth for depths greater than 1000 m.

The dissolved oxygen analyses were done in the shipboard laboratory by a modified Winkler method (Carpenter, 1965).

Salinity-temperature-pressure data were obtained with a Bissett-Berman Model 9040 STD.

## Computations

All hydrographic data were processed with the aid of an IBM 360 computer. Reversing thermometer temperature corrections, thermometric depth calculations, and accepted depth from the "depth difference" method were computed. Extraneous thermometric depths caused by thermometer malfunctions are automatically edited and replaced. A Calcomp 563 Off-line Plotter was used to plot temperature-salinity and temperature-oxygen diagrams, as well as plots of temperature, salinity and dissolved oxygen vs  $\log_{10}$  depth. These plots were used to check the data for errors.

Missing hydrographic data were obtained using a weighted parabolas interpolation method (Reiniger and Ross, 1968). These data are indicated with an asterisk in this data record.

Analog records from the salinity-temperature-pressure instrument have been hand digitized, then replotted using the Calcomp Plotter. Digitization was continued until original and computer plotted traces were coincident. Temperature and salinity values were listed at standard pressures; integrals (depths, geopotential anomaly, and potential energy anomaly) were computed from the entire array of digitized data.

STP salinity data have been adjusted to make them compatible with hydrographic cast salinity data.

The following corrections were applied:

0-61 M	-0.04 ppt.
62-131	-0.03
132-200	-0.02
201-310	-0.01
311-609	-0.02
610-910	-0.03
911-1155	-0.04
1156-1500	-0.05

The headings for the data listings are explained as follows:

PRESS	is pressure (decibars)
TEMP	is temperature (decibars Celsius)
SAL	is salinity (parts per thousand)
DEPTH	is reported in meters
SIGMA-T	is specific gravity anomaly
SVA	is specific volume anomaly



THETA is potential temperature (degrees Celsius)  
SVA (THETA) is potential specific volume anomaly  
DELTA D is geopotential anomaly (J/kg)  
POT EN is potential energy in units of  $10^8$  ergs/cm<sup>2</sup>  
OXY is the concentration of dissolved oxygen expressed  
in milliliters per liter  
" " "  
V-B PERIOD is the Vaisala-Brunt period in minutes

#### Summary of Hydrographic Data

The hydrographic data are graphically summarized as follows: composite plot of temperature vs Log<sub>10</sub> depth (Figs. 5,6), composite plot of salinity vs Log<sub>10</sub> depth (Figs. 7,8) and composite plot of dissolved oxygen vs Log<sub>10</sub> depth (Figs. 9,10).

#### REFERENCES

- Carpenter, J.H. 1965. The Chesapeake Bay Institute Technique for the Winkler Dissolved Oxygen Method. Limnol. & Oceanogr., 10: 141-143.
- Collins, C.A., R.L. Tripe, D. A. Healey, and J. Joergensen, 1969. The Time Distribution of Serial Oceanographic Data from the Ocean Station P Program. Fisheries Research Board of Canada, Technical Report No. 106
- Reiniger, R.F. and C.K. Ross, 1968. A Method of Interpolation with Application to Oceanographic Data. Deep Sea Re. 15: 185-193.
- U.S.N. Hydrographic Office, 1955. Instruction Manual for Oceanographic Observations, Publication No. 607.

LIST OF FIGURES

- Figure 1      Chart showing Line P positions.
- Figure 2      Profiles of salinity difference between samples obtained from bottles and data from a Bissett-Berman Model 9040 STD. Ref. No. 70-004
- Figure 3      Profiles of temperature difference between reversing thermometers and data from a Bissett-Berman Model 9040 STD. Ref. No. 70-004.
- Figure 4      Temperature and salinity in the upper 150 meters. Solid lines show positions of isotherms, in 1.00° C intervals. Salinity values are indicated by the hatched areas; the different types of hatching correspond to the areas between isohaline lines separated by 0.2 ‰.
- Figure 5      Composite plot of temperature vs log<sub>10</sub> depth.
- Figure 6      Composite plot of temperature vs log<sub>10</sub> depth.
- Figure 7      Composite plot of salinity vs log<sub>10</sub> depth.
- Figure 8      Composite plot of salinity vs log<sub>10</sub> depth.
- Figure 9      Composite plot of oxygen vs log<sub>10</sub> depth.
- Figure 10     Composite plot of oxygen vs log<sub>10</sub> depth.
- Figure 11     T-S plot of surface temperature and salinity observations on Line P (asterisks) and at Station P (pluses) during cruise P-70-4.



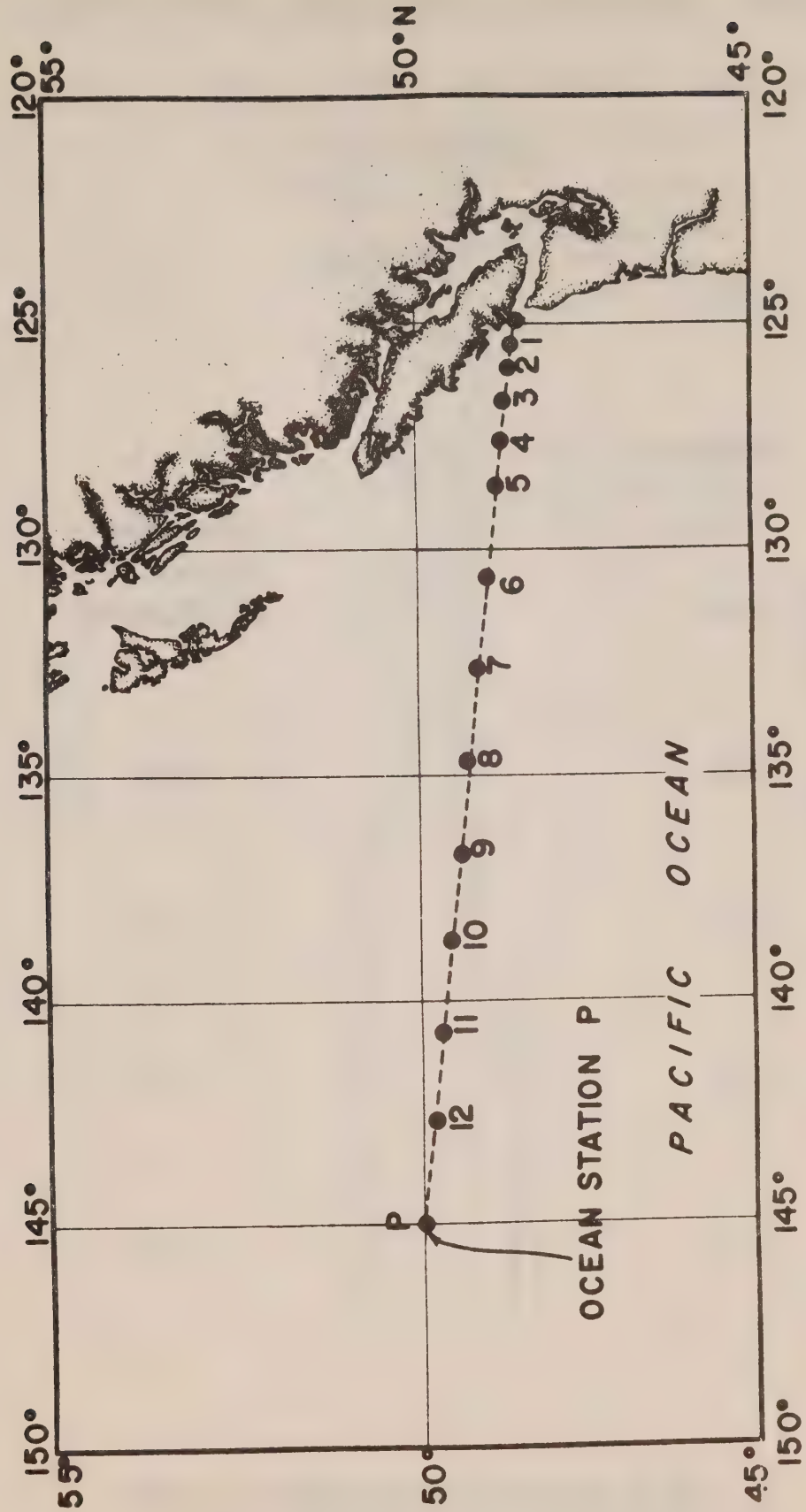


Fig. 1 Chart showing Line P station positions.

# SALINITY DIFFERENCE, NANSEN - S.T.D. ‰

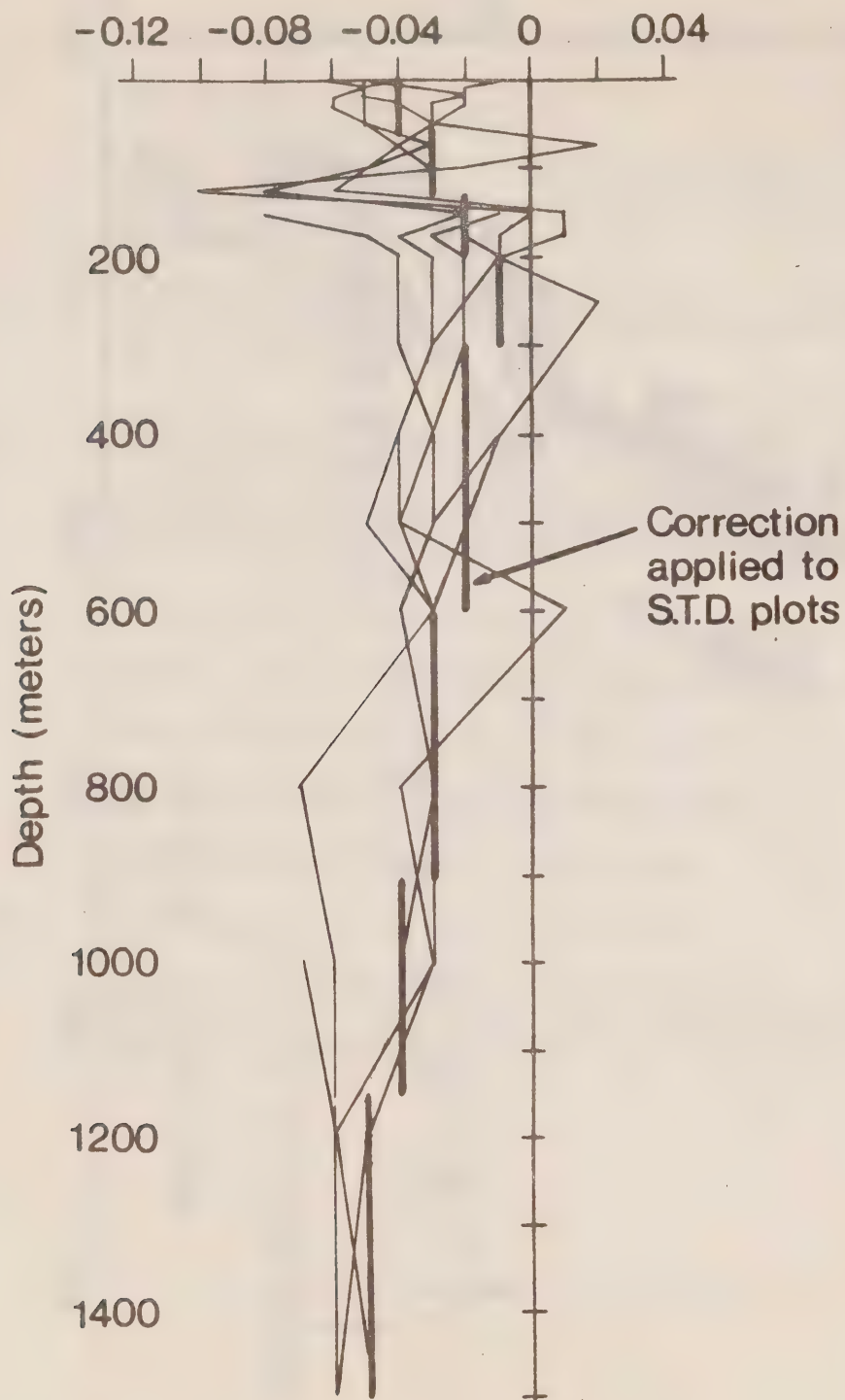


Fig. 2 Profiles of salinity difference between samples obtained from bottles and data from a Bissett-Berman Model 9040 S.T.D. (Serial No. 5326). REFERENCE NO. 70-004.



# TEMPERATURE DIFFERENCE, NANSEN - S.T.D. ( $^{\circ}\text{C}$ )

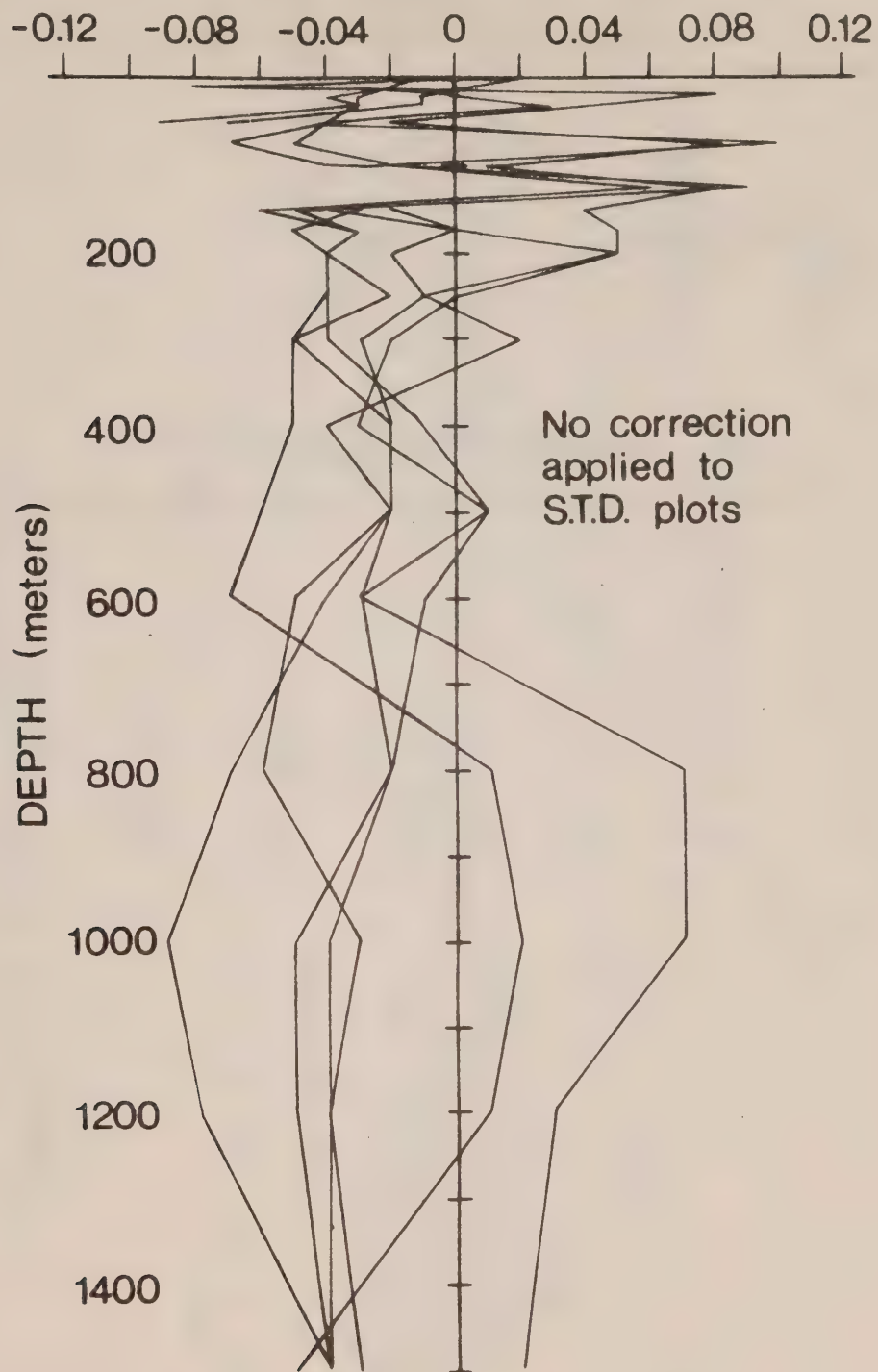


Fig. 3 Profiles of temperature difference between reversing thermometers and data from a Bissett-Berman Model 9040 S.T.D. (Serial No. 5326). REFERENCE NO. 70-004.

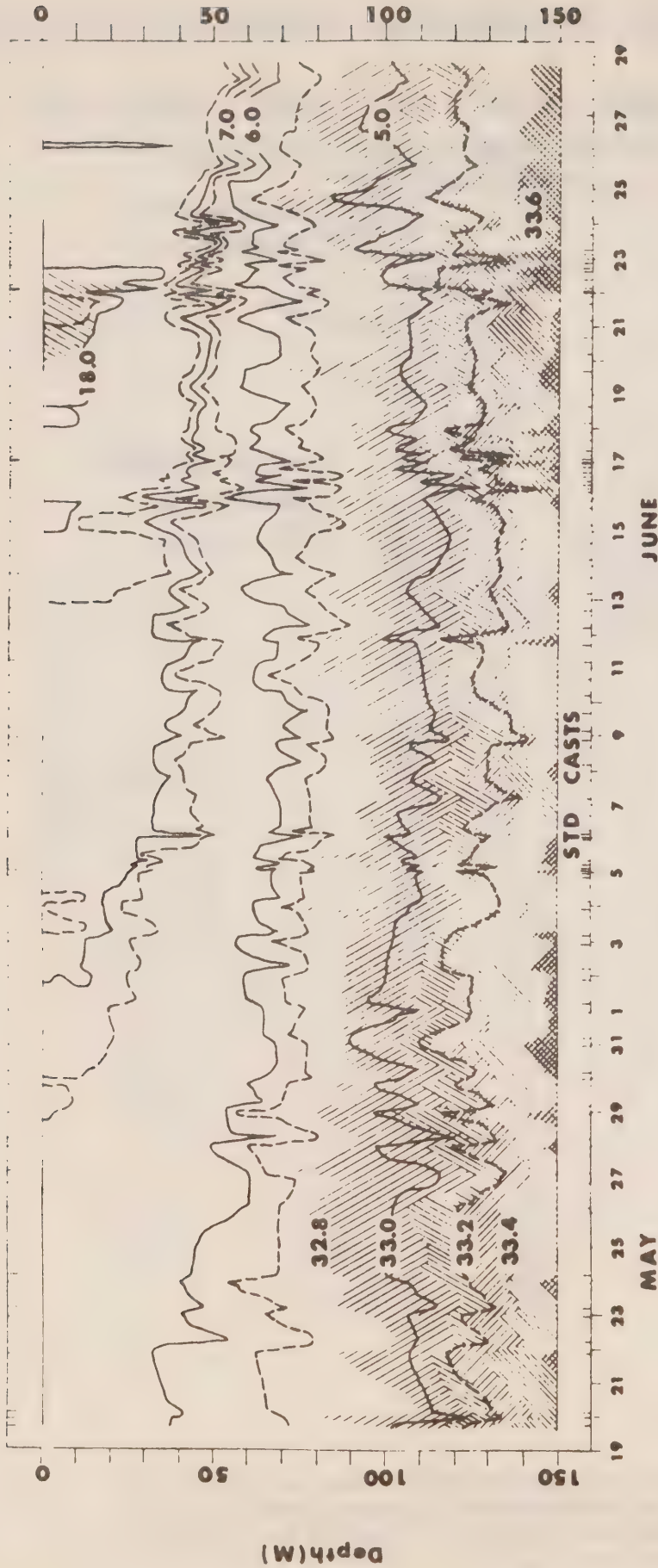


Figure 4

Temperature and salinity in the upper 150 meters. Solid lines show positions of isotherms, in 1.00 C intervals. Salinity values are indicated by the hatched areas: the different types of hatching correspond to the areas between isohaline lines separated by 0.2 ‰.

This figure courtesy of Mr. K. Denman, Institute of Oceanography,  
University of British Columbia



COMPOSITE PLOTS OF TEMPERATURE,  
SALINITY AND DISSOLVED OXYGEN VS. DEPTH

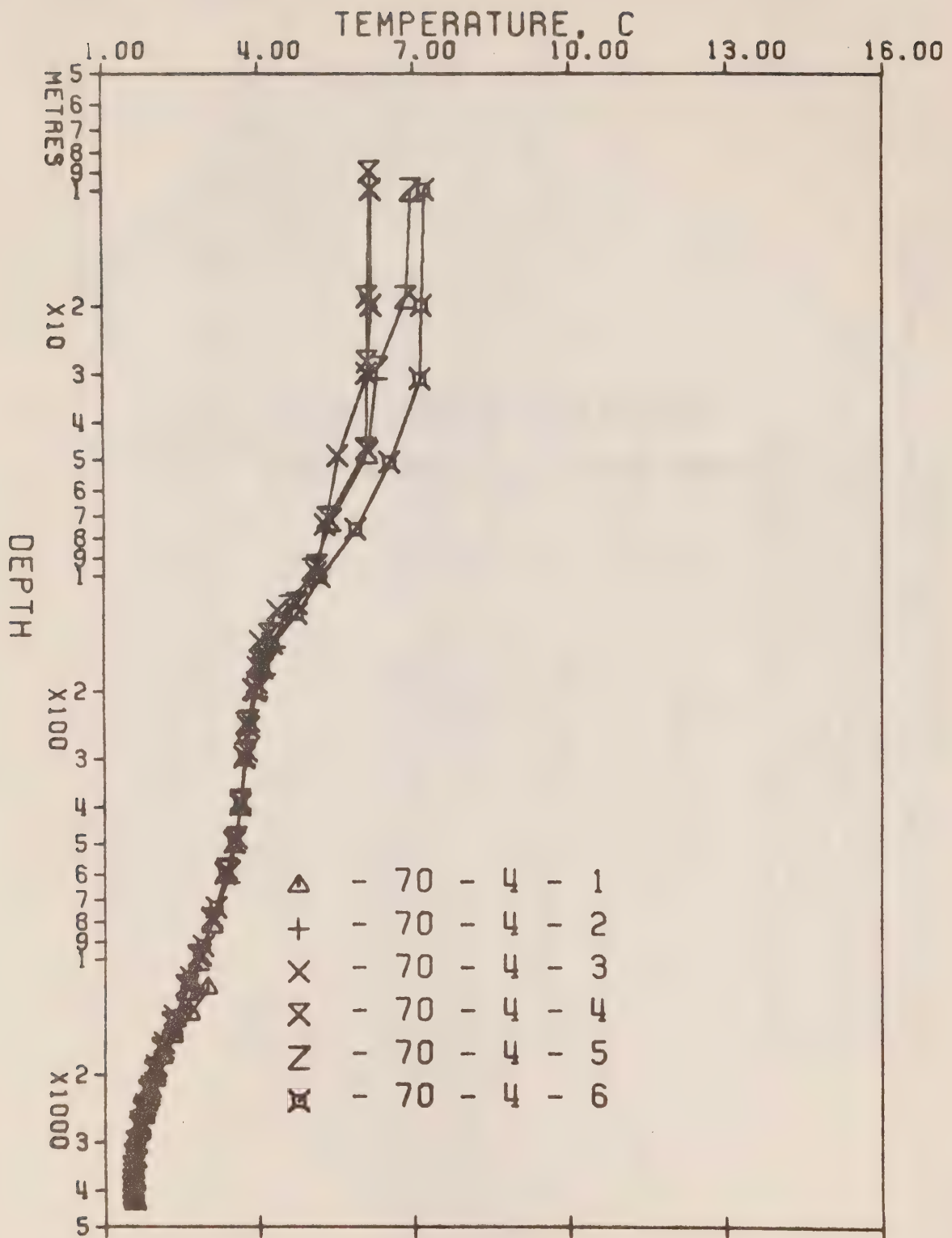


Figure 5 Composite plot of temperature vs  $\log_{10}$  depth.



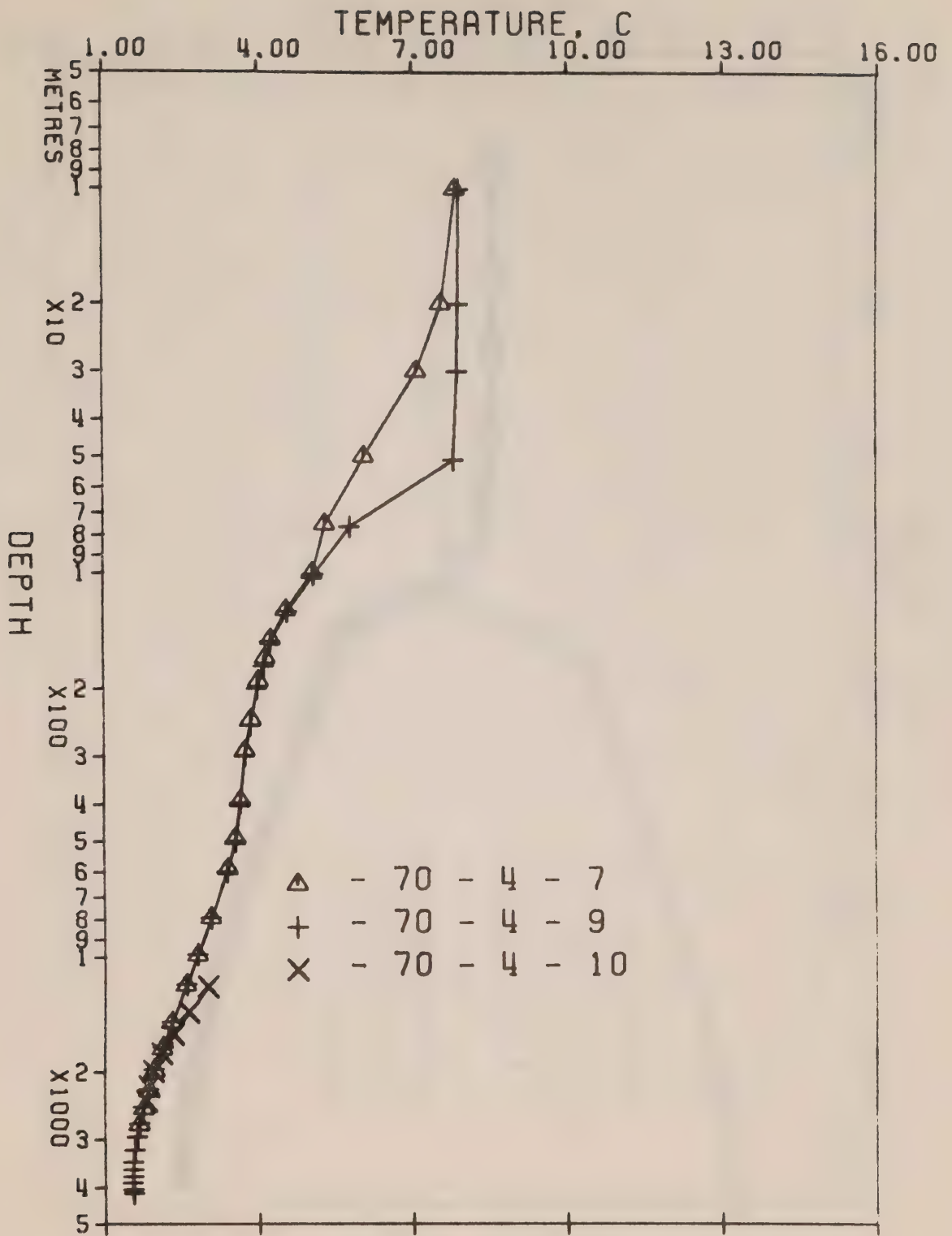


Figure 6 Composite plot of temperature vs  $\log_{10}$  depth.

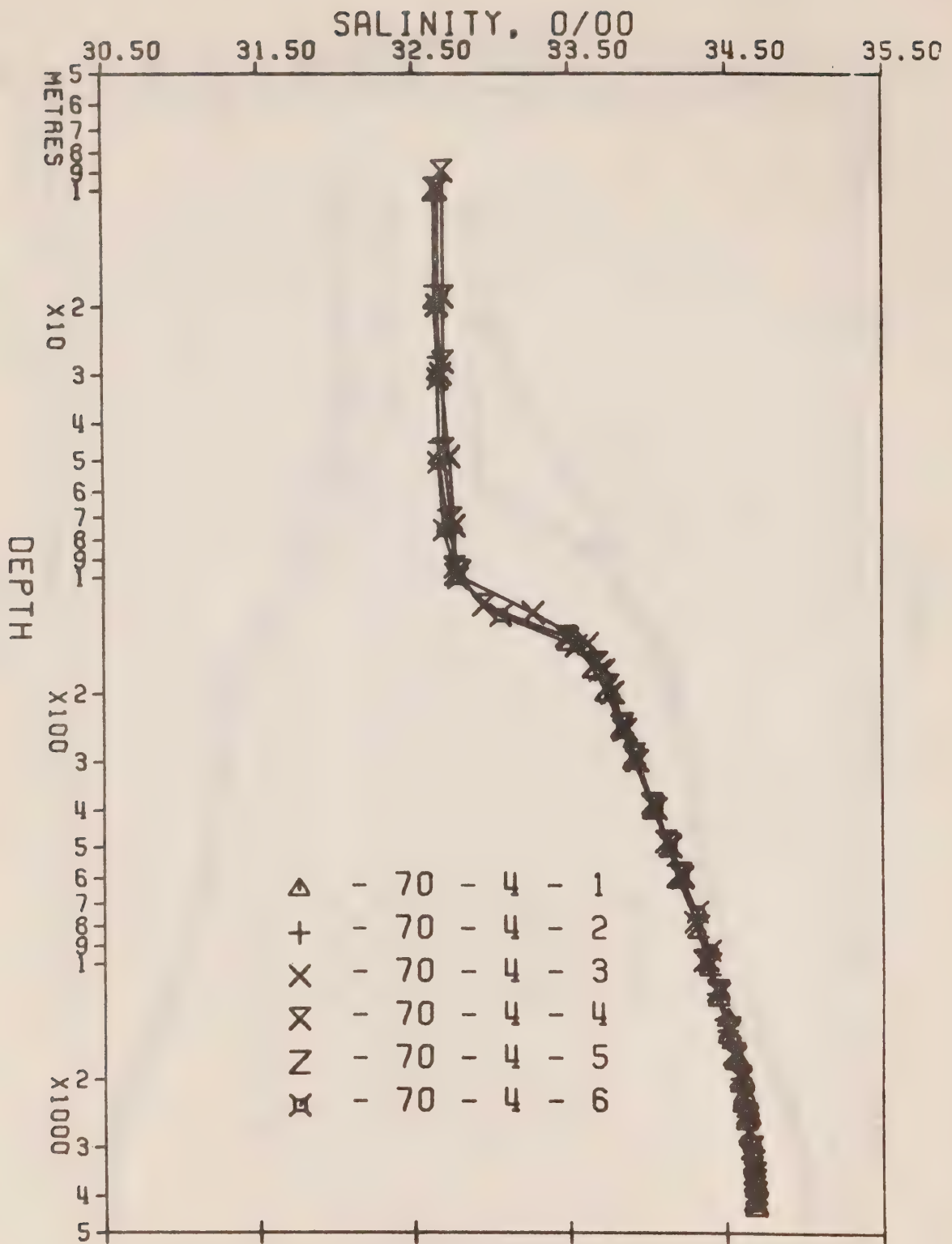


Figure 7      Composite plot of salinity vs  $\log_{10}$  depth.



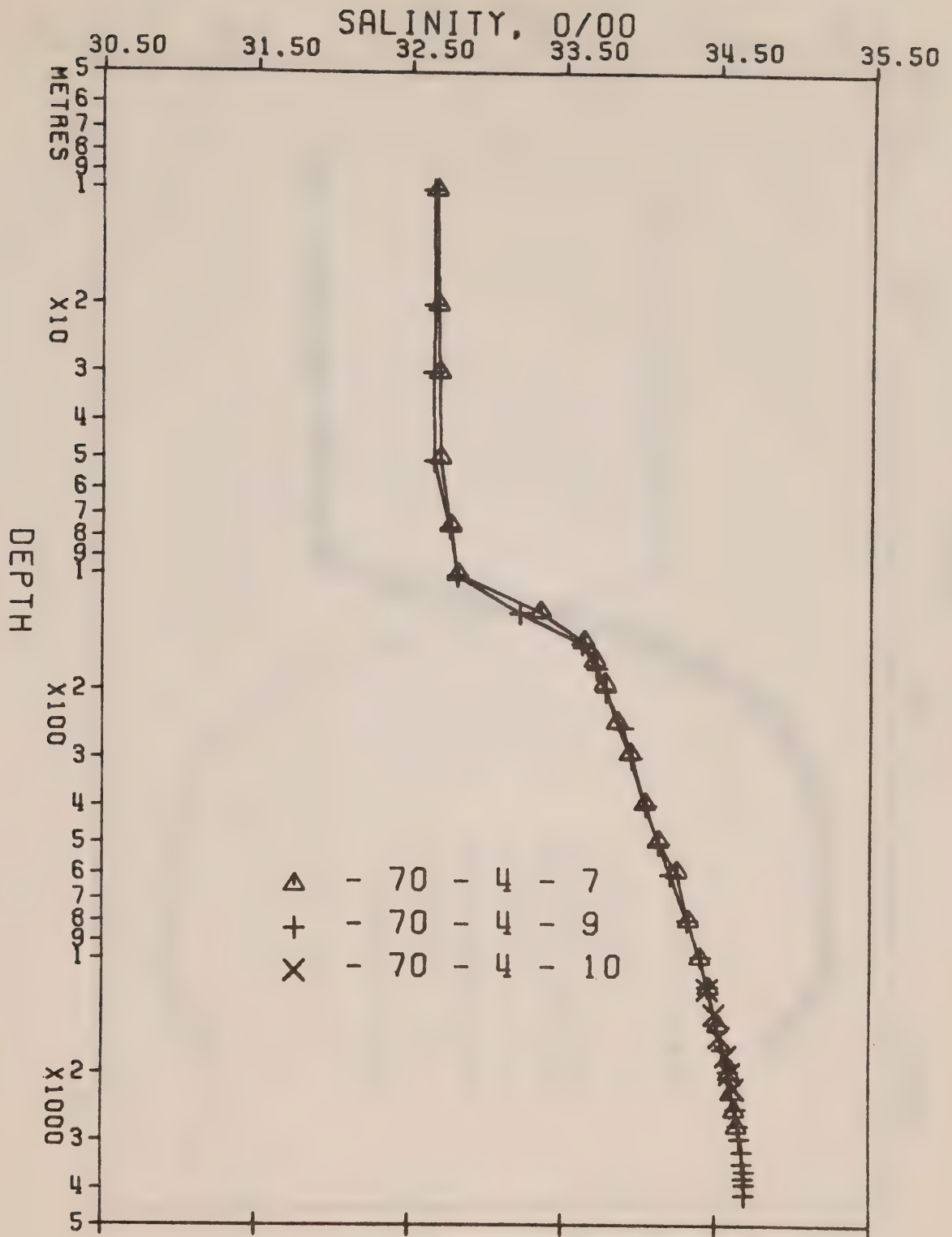


Figure 8 Composite plot of salinity vs  $\log_{10}$  depth.

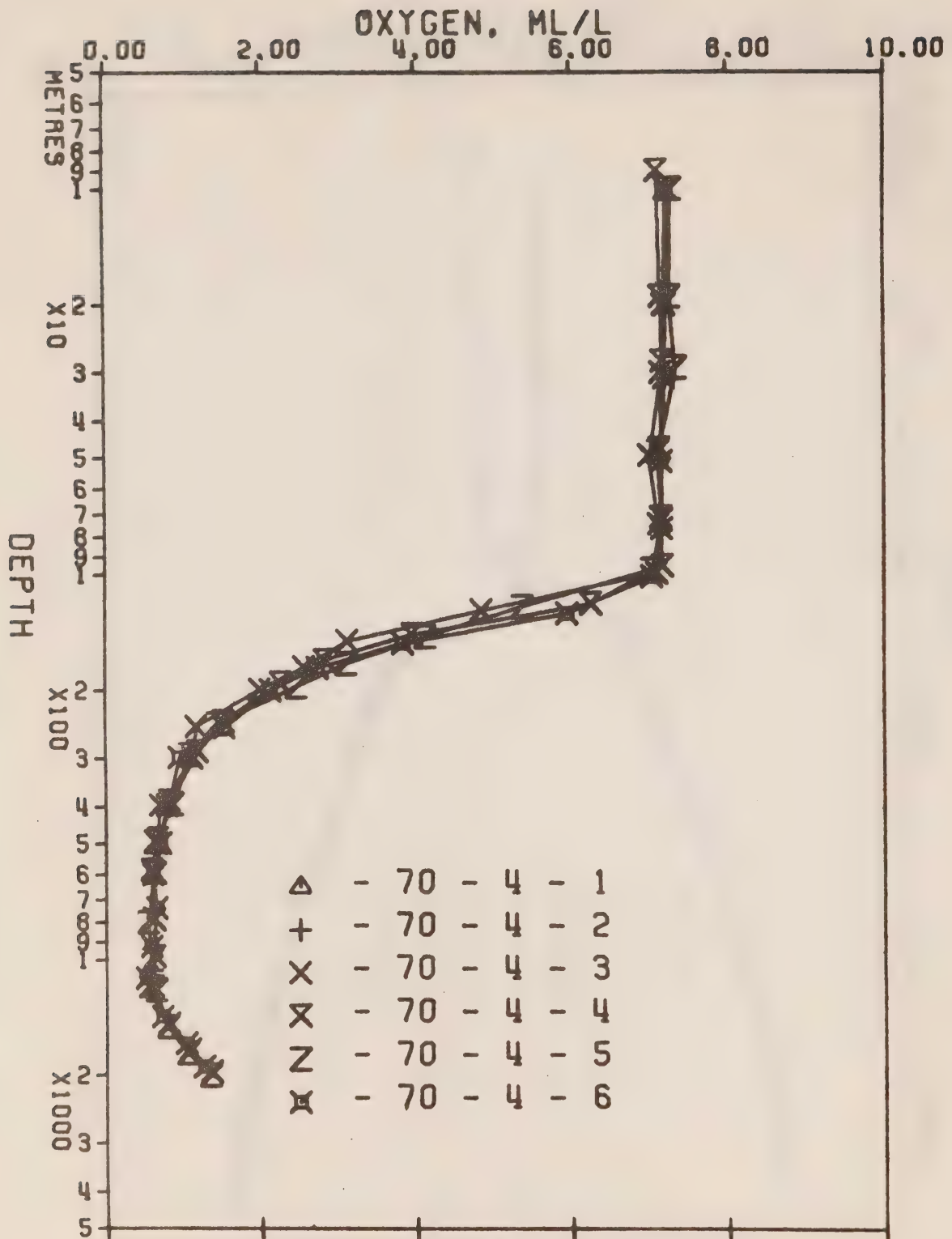


Figure 9 Composite plot of oxygen vs log<sub>10</sub> depth.



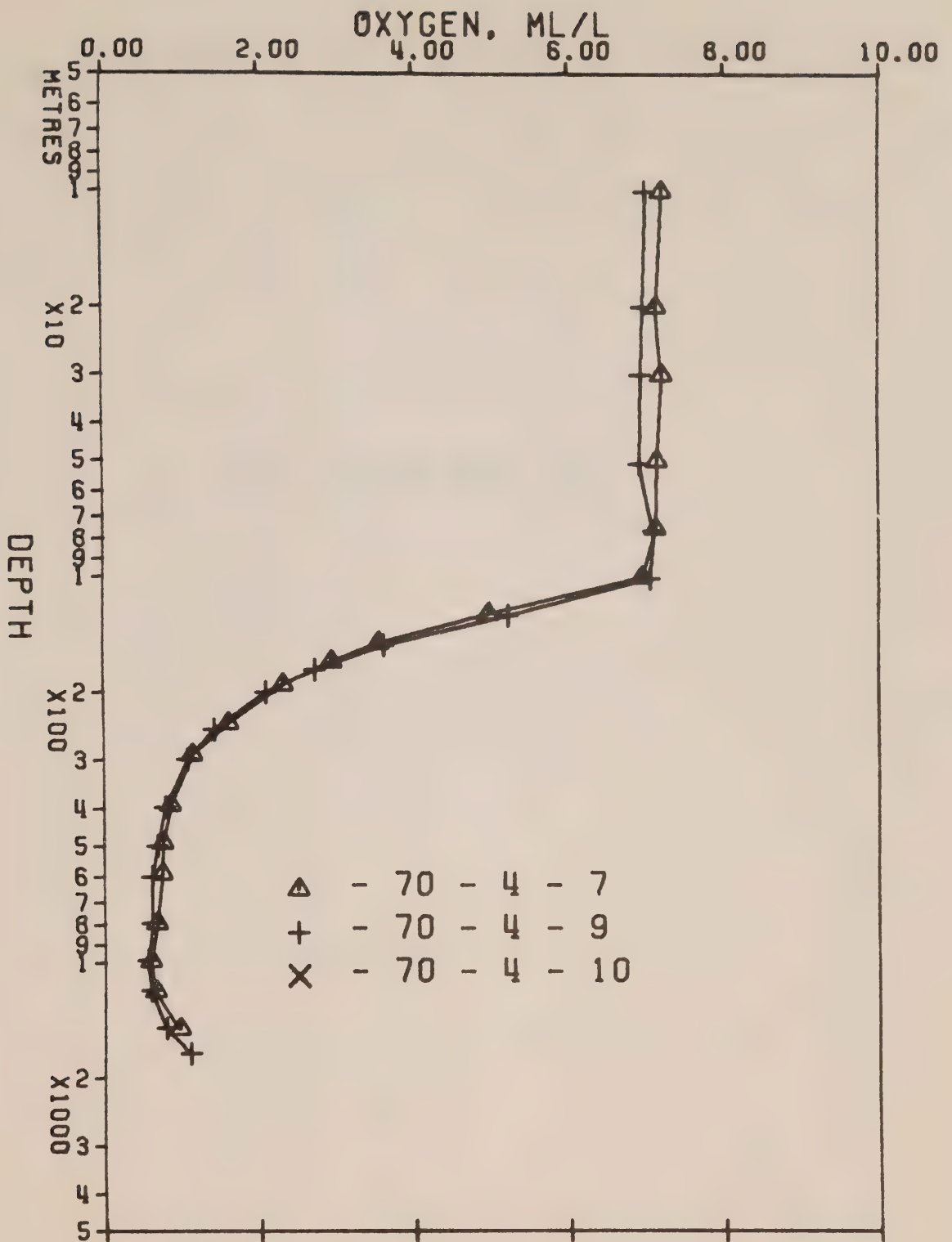
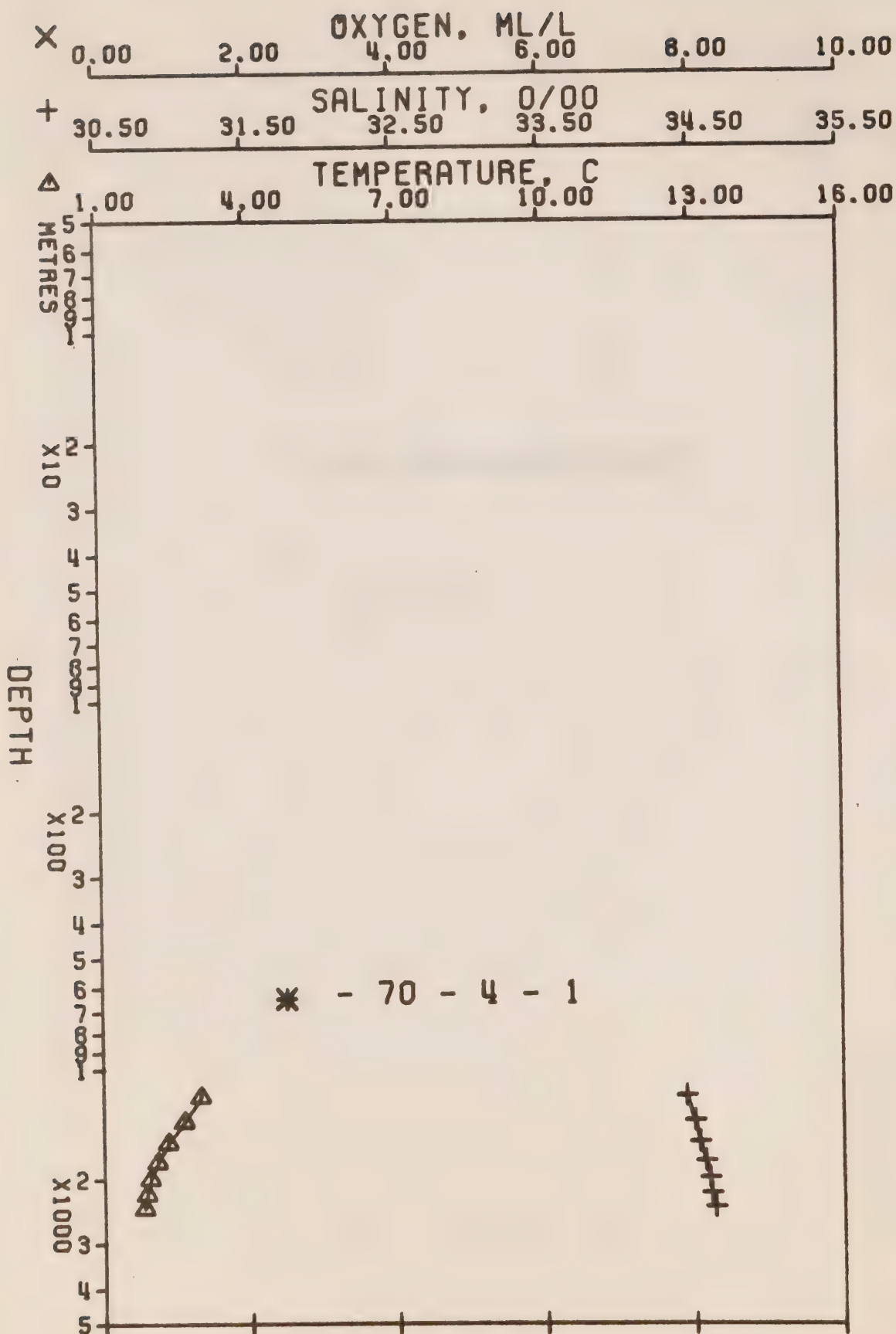


Figure 10 Composite plot of oxygen vs log<sub>10</sub> depth.





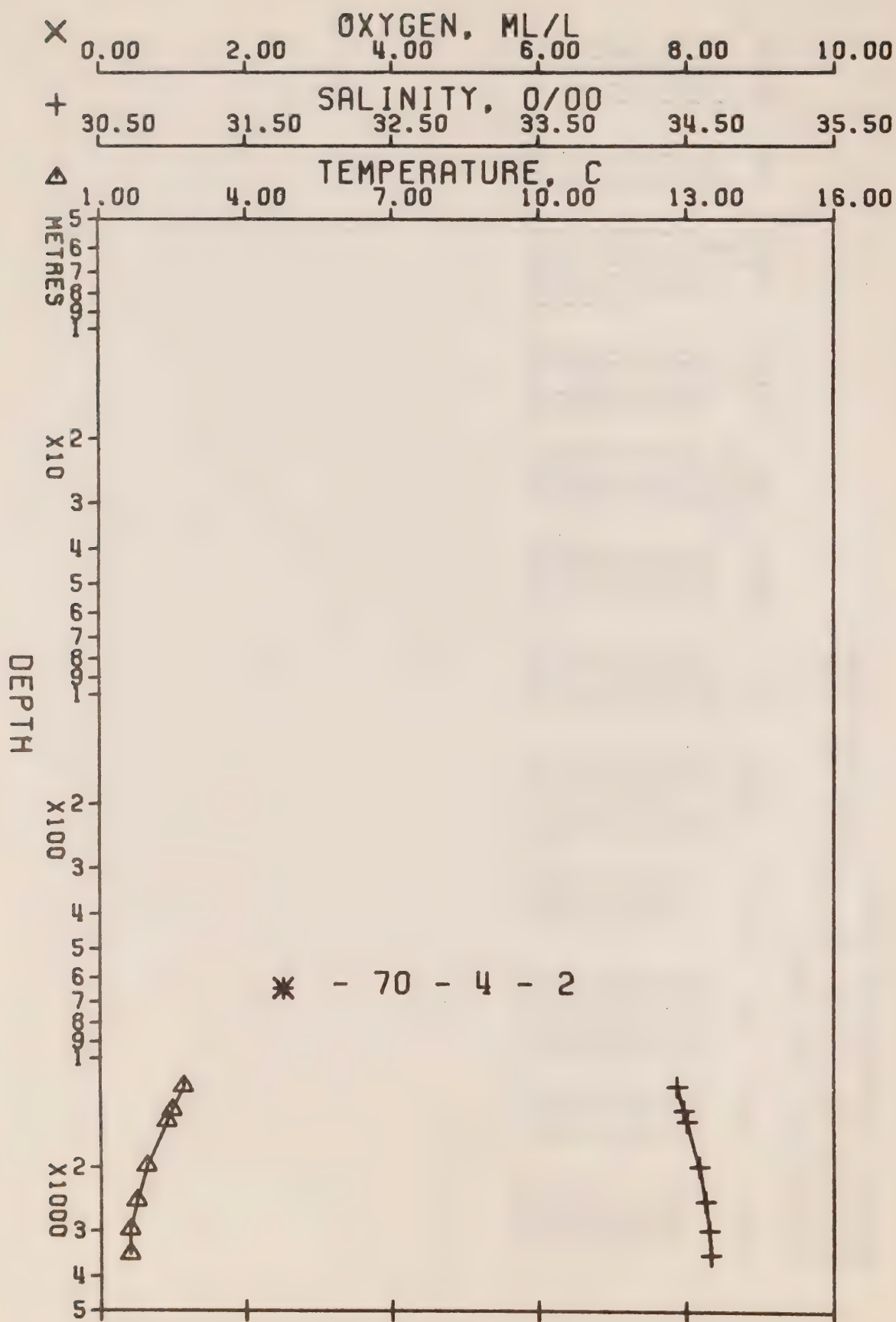
RESULTS OF NANSEN BOTTLE CASTS





PACIFIC OCEANOGRAPHIC GROUP  
 REFERENCE NO. 70- 4- 1 DATE 16/ 5/70  
 POSITION 48-46.0 N, 127-40.0 W GMT 8.4  
 HYDROGRAPHIC CAST DATA

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	POT. EN	OXY	SOUND
0	9.88	32.060	0	24.703	325.2	9.88	324.9	0.0	0.0	0.0	1486.
1205	2.96	34.452	1194	27.476	69.7	2.88	60.9	22.02	56.22	0.0	1481.
1410	2.62	34.505	1396	27.549	63.1	2.52	53.9	23.36	74.31	0.0	1483.
1615	2.29	34.537	1598	27.602	58.0	2.18	48.8	24.60	93.41	0.0	1486.
1820	2.07	34.577	1800	27.652	53.3	1.95	44.0	25.74	113.33	0.0	1488.
2025	1.92	34.599	2002	27.681	50.8	1.78	41.1	26.80	134.20	0.0	1491.
2231	1.84	34.611	2204	27.697	49.7	1.68	39.6	27.83	156.60	0.0	1494.
2436	1.79	34.636	2405	27.721	47.9	1.62	37.1	28.83	180.38	0.0	1497.





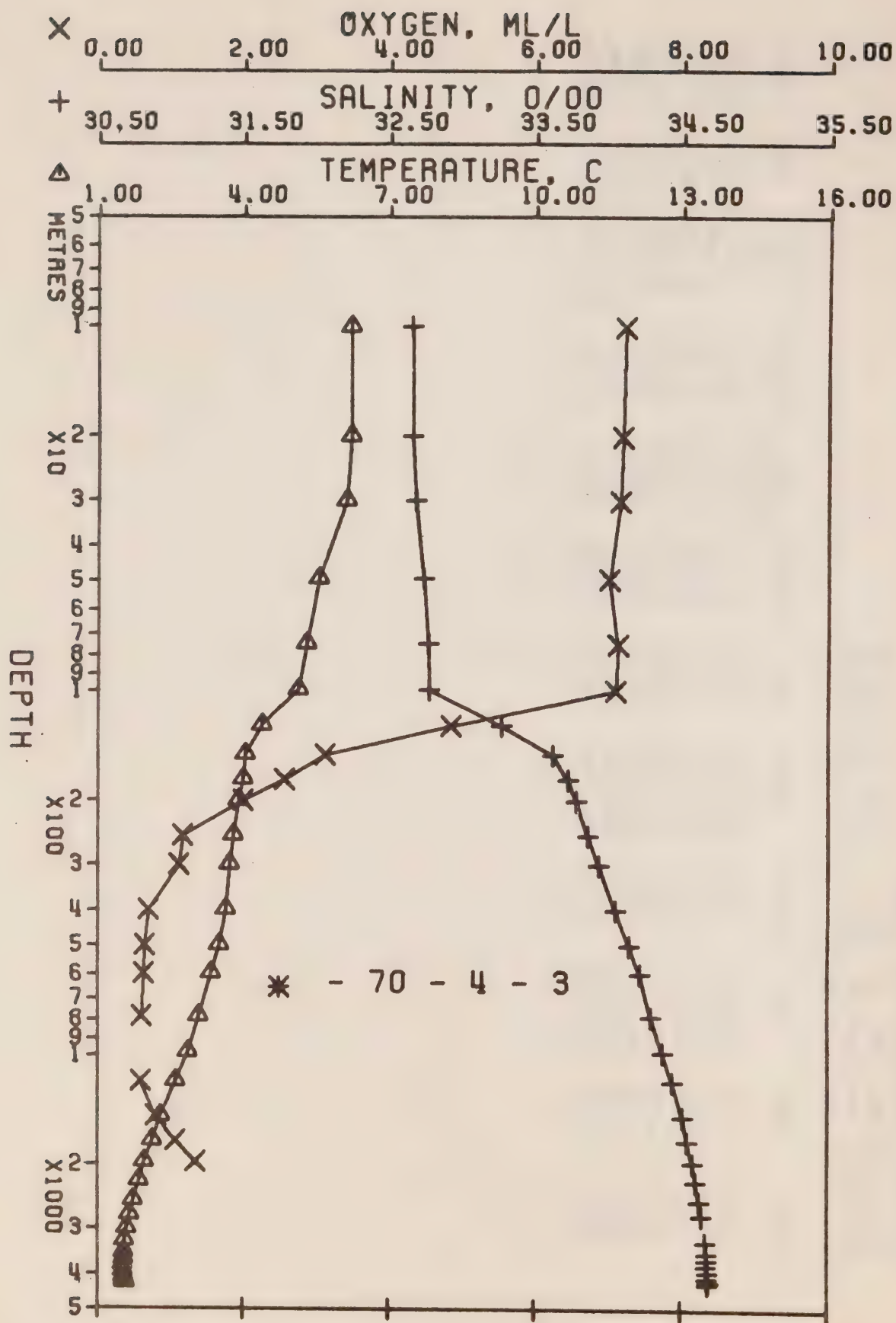
# PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 2 DATE 17/ 5/70

POSITION 49-26.0 N, 136-40.0 W GMT 15.1

## HYDROGRAPHIC CAST DATA

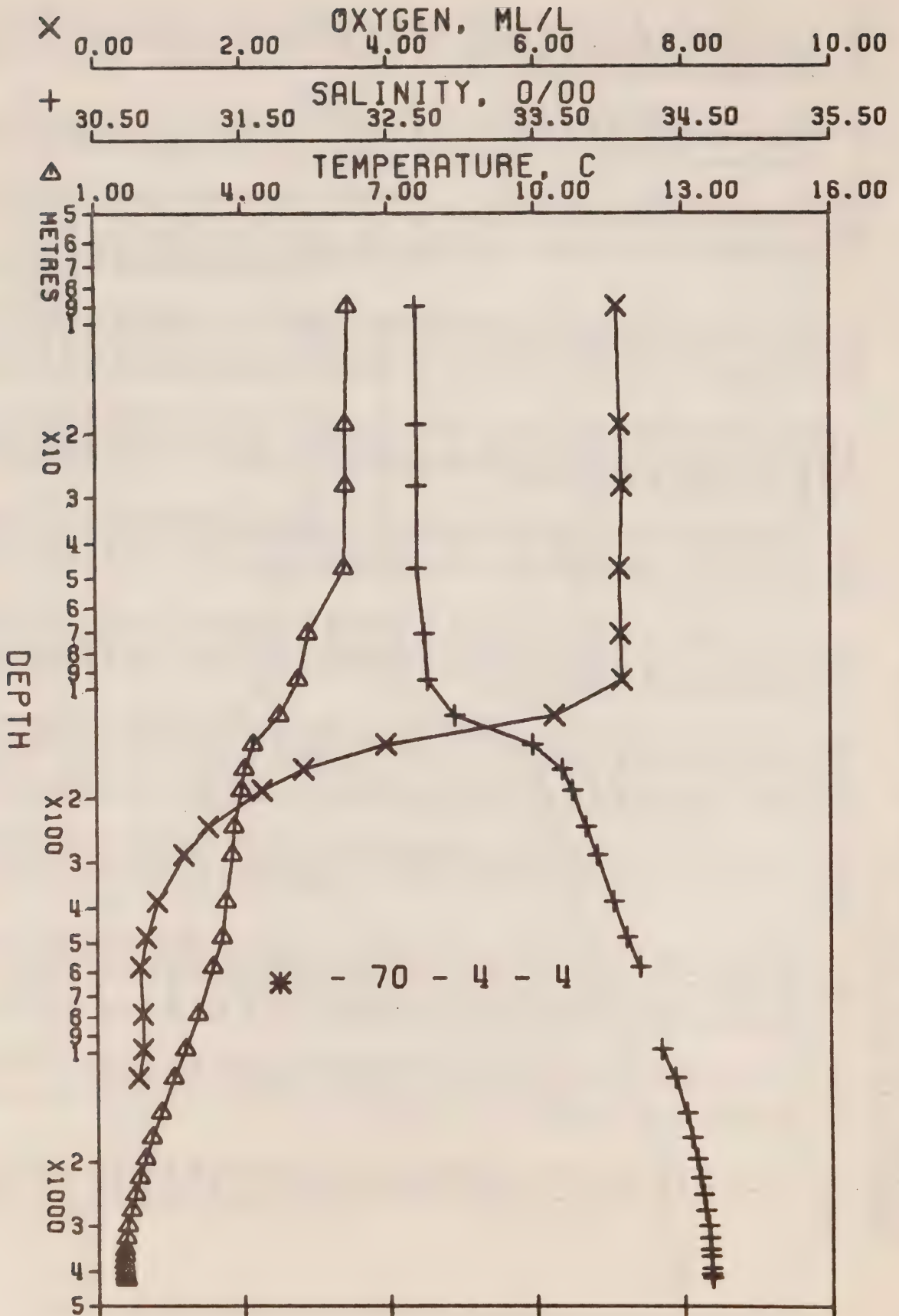
PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	POT. EN	OXY	SOUND
1212	2.70	34.440	1199	27.490	67.6	2.62	59.6	0.0	0.0	0.0	1480.
1413	2.45	34.487	1397	27.549	62.5	2.35	53.9	1.71	13.69	0.0	1483.
1513	2.35	34.505	1496	27.572	60.5	2.25	51.8	2.33	22.90	0.0	1484.
2016	1.93	34.590	1991	27.673	51.5	1.79	41.9	5.12	73.09	0.0	1491.
2521	1.72	34.631	2487	27.722	47.7	1.54	37.1	7.61	130.63	0.0	1498.
3031	1.58	34.656	2986	27.753	45.6	1.36	33.9	9.97	197.44	0.0	1506.
3546	1.58	34.663	3490	27.758	46.6	1.30	33.0	12.34	276.89	0.0	1515.



PACIFIC OCEANOGRAPHIC GROUP  
REFERENCE NO. 70- 4- 3 DATE 21/ 5/70  
POSITION 50- 2.0 N, 145- 5.0 W GMT 18.8  
HYDROGRAPHIC CAST DATA

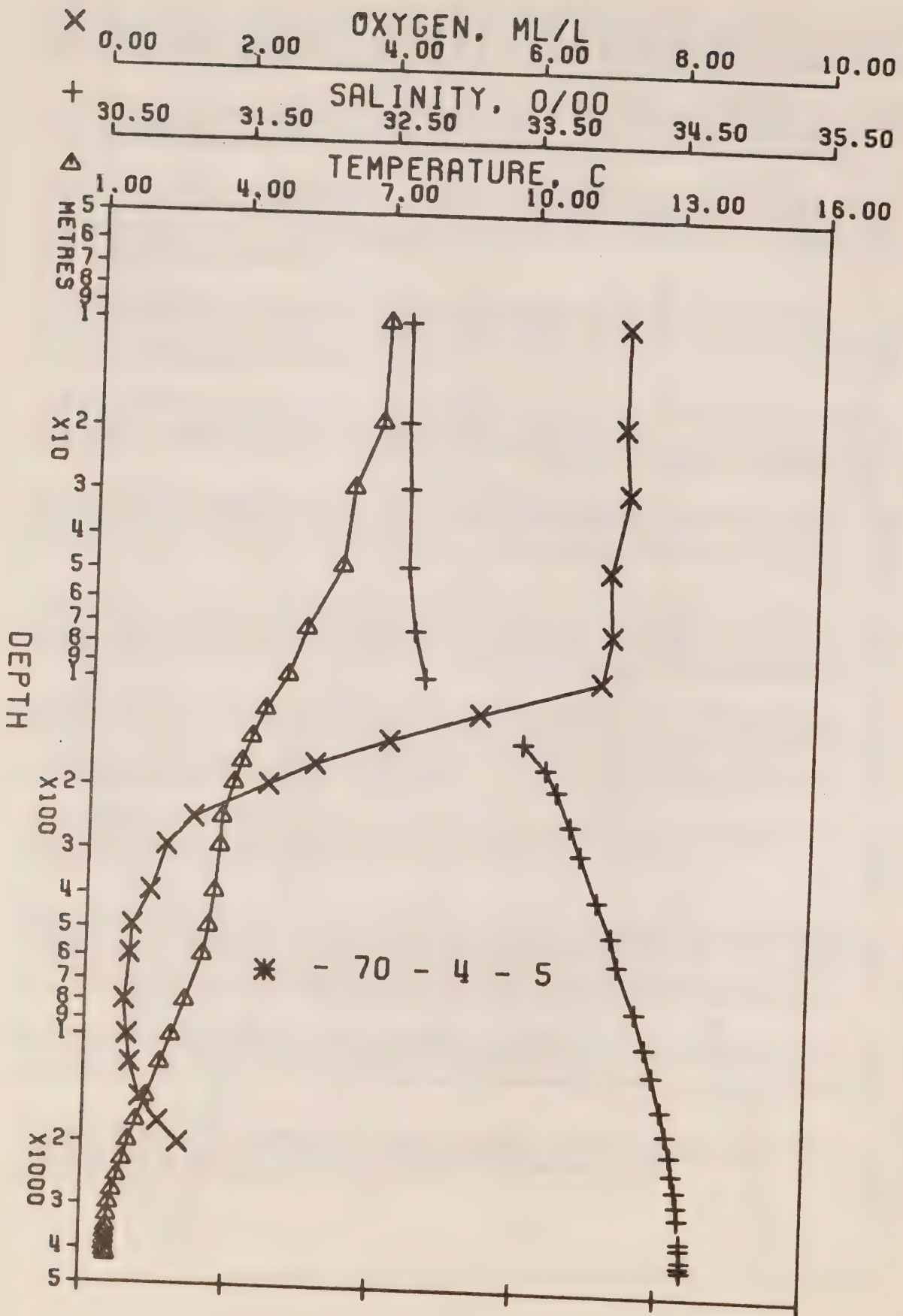
PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	POT. EN	OXY	SOUND
0	6.21	32.644	0	25.692	231.1	6.21	230.8	0.0	0.0	7.14	1473.
10	6.19	32.660	10	25.707	229.8	6.19	229.5	0.23	0.01	7.23	1473.
20	6.19	32.662	20	25.709	229.7	6.19	229.3	0.46	0.05	7.19	1473.
30	6.10	32.687	30	25.740	227.0	6.10	226.3	0.69	0.11	7.16	1473.
49	5.53	32.740	49	25.850	216.6	5.53	215.8	1.12	0.28	7.01	1471.
74	5.28	32.768	74	25.901	211.9	5.27	210.9	1.65	0.62	7.13	1470.
100	5.11	32.776	99	25.927	209.7	5.10	208.5	2.19	1.10	7.10	1470.
125	4.36	33.276	124	26.404	164.5	4.35	163.2	2.67	1.64	4.85	1468.
150	4.02	33.626	149	26.717	135.0	4.01	133.5	3.04	2.16	3.12	1468.
175	3.97	33.729	174	26.804	127.0	3.96	125.2	3.37	2.70	2.56	1468.
200	3.88	33.786	199	26.858	122.0	3.87	120.0	3.68	3.30	1.99	1468.
250	3.78	33.865	248	26.931	115.4	3.76	113.1	4.26	4.64	1.16	1468.
300	3.70	33.939	298	26.998	109.4	3.68	106.7	4.83	6.23	1.11	1469.
401	3.62	34.056	398	27.099	100.7	3.59	97.1	5.89	10.01	0.69	1471.
502	3.49	34.152	498	27.188	92.9	3.46	88.6	6.86	14.51	0.64	1472.
601	3.33	34.224	596	27.260	86.6	3.29	81.7	7.75	19.49	0.63	1473.
790	3.07	34.300	783	27.345	79.5	3.02	73.5	9.31	30.58	0.60	1475.
989	2.85	34.382	979	27.430	72.3	2.78	65.4	10.82	44.22	0.0	1477.
1188	2.59	34.446	1176	27.504	65.8	2.51	58.3	12.19	59.47	0.59	1480.
1487	2.27	34.513	1471	27.585	58.9	2.17	50.6	14.04	84.74	0.80	1483.
1738	2.11	34.547	1718	27.625	55.7	1.99	46.6	15.48	108.33	1.07	1487.
1990	1.94	34.587	1966	27.670	51.7	1.80	42.2	16.83	133.98	1.35	1490.
2245	1.84	34.604	2216	27.691	50.2	1.68	40.0	18.12	161.93	0.0	1494.
2539	1.72	34.629	2505	27.721	47.9	1.54	37.1	19.57	197.14	0.0	1499.
2789	1.64	34.644	2750	27.739	46.5	1.44	35.3	20.75	229.14	0.0	1503.
3039	1.58	34.659*	2995	27.755	45.4	1.35	33.6	21.90	263.27	0.0	1507.
3290	1.54	34.671	3240	27.768	44.7	1.29	32.3	23.02	299.61	0.0	1511.
3543	1.52	34.678	3487	27.775	44.6	1.25	31.5	24.15	338.88	0.0	1515.
3694	1.52	34.680	3635	27.776	44.9	1.23	31.2	24.83	363.89	0.0	1517.
3847	1.51	34.676	3784	27.774	45.5	1.20	31.4	25.52	390.43	0.0	1520.
4000	1.51	34.686	3933	27.782	45.1	1.19	30.5	26.21	418.09	0.0	1523.
4154	1.53	34.682	4083	27.777	46.1	1.19	30.8	26.91	447.29	0.0	1525.
4257	1.54	34.692	4183	27.784	45.8	1.19	30.0	27.38	467.47	0.0	1527.
4309	1.55	34.684	4234	27.777	46.7	1.19	30.6	27.63	478.04	0.0	1528.





PACIFIC OCEANOGRAPHIC GROUP  
 REFERENCE NO. 70- 4- 4 DATE 26/ 5/70  
 POSITION 49-48.0 N, 144-48.0 W GMT 20.6  
 HYDROGRAPHIC CAST DATA

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	POT. EN	OXY	SOUND
0	6.20	32.705	0	25.741	226.4	6.20	226.2	0.0	0.0	0.0	1473.
9	6.18	32.698	9	25.738	226.8	6.18	226.5	0.21	0.01	7.12	1473.
19	6.12	32.701	19	25.748	226.0	6.12	225.5	0.43	0.04	7.16	1473.
28	6.12	32.702	28	25.749	226.0	6.12	225.4	0.64	0.09	7.18	1473.
47	6.08	32.701	47	25.753	225.8	6.08	225.0	1.07	0.26	7.15	1473.
71	5.33	32.748	71	25.880	214.0	5.32	213.0	1.60	0.58	7.16	1471.
96	5.13	32.770	95	25.920	210.3	5.12	209.2	2.12	1.02	7.18	1470.
120	4.74	32.954	119	26.109	192.6	4.73	191.2	2.61	1.56	6.26	1469.
144	4.19	33.486	143	26.589	147.1	4.18	145.6	3.02	2.11	3.96	1468.
168	4.01	33.683	167	26.763	130.7	4.00	129.1	3.35	2.63	2.83	1468.
192	3.95	33.756	191	26.827	124.9	3.94	123.0	3.66	3.20	2.26	1468.
242	3.80	33.845	240	26.913	117.1	3.78	114.8	4.25	4.52	1.52	1468.
290	3.76	33.918	288	26.975	111.6	3.74	108.9	4.81	6.02	1.18	1469.
389	3.63	34.031	386	27.078	102.5	3.60	99.1	5.86	9.67	0.81	1470.
489	3.55	34.121	485	27.157	95.7	3.52	91.5	6.85	14.10	0.66	1472.
589	3.36	34.211	584	27.247	87.8	3.32	82.9	7.77	19.14	0.58	1473.
797	3.05	34.304*	790	27.350	79.0	3.00	73.1	9.49	31.30	0.62	1475.
995	2.78	34.355	985	27.415	73.6	2.71	66.9	10.99	45.08	0.62	1477.
1191	2.54	34.443	1179	27.506	65.5	2.46	58.1	12.36	60.28	0.55	1479.
1487	2.27	34.518	1471	27.589	58.5	2.17	50.1	14.18	85.13	0.0	1483.
1735	2.08	34.549	1715	27.629	55.2	1.96	46.3	15.58	108.23	0.0	1487.
1985	1.94	34.586	1961	27.669	51.8	1.80	42.3	16.92	133.53	0.0	1490.
2239	1.83	34.604	2210	27.692	50.1	1.67	40.0	18.21	161.27	0.0	1494.
2496	1.74	34.626	2463	27.717	48.2	1.56	37.6	19.47	191.81	0.0	1498.
2760	1.66	34.641	2721	27.735	47.0	1.46	35.7	20.73	225.34	0.0	1502.
3043	1.58	34.658	2999	27.754	45.5	1.35	33.7	22.04	264.11	0.0	1507.
3293	1.55	34.667	3243	27.764	45.1	1.30	32.6	23.16	300.54	0.0	1511.
3545	1.53	34.672	3489	27.769	45.1	1.26	32.0	24.30	340.13	0.0	1515.
3696	1.52	34.676	3637	27.773	45.1	1.23	31.6	24.98	365.39	0.0	1518.
3848	1.51	34.679*	3785	27.776	45.2	1.20	31.1	25.67	391.72	0.0	1520.
4002	1.52	34.679	3935	27.775	45.8	1.20	31.1	26.37	419.69	0.0	1523.
4156	1.53	34.674	4085	27.771	46.7	1.19	31.5	27.08	449.35	0.0	1525.
4260	1.54	34.684	4186	27.778	46.4	1.19	30.6	27.57	470.07	0.0	1527.
4312	1.55	34.689*	4237	27.781	46.4	1.19	30.3	27.81	480.69	0.0	1528.





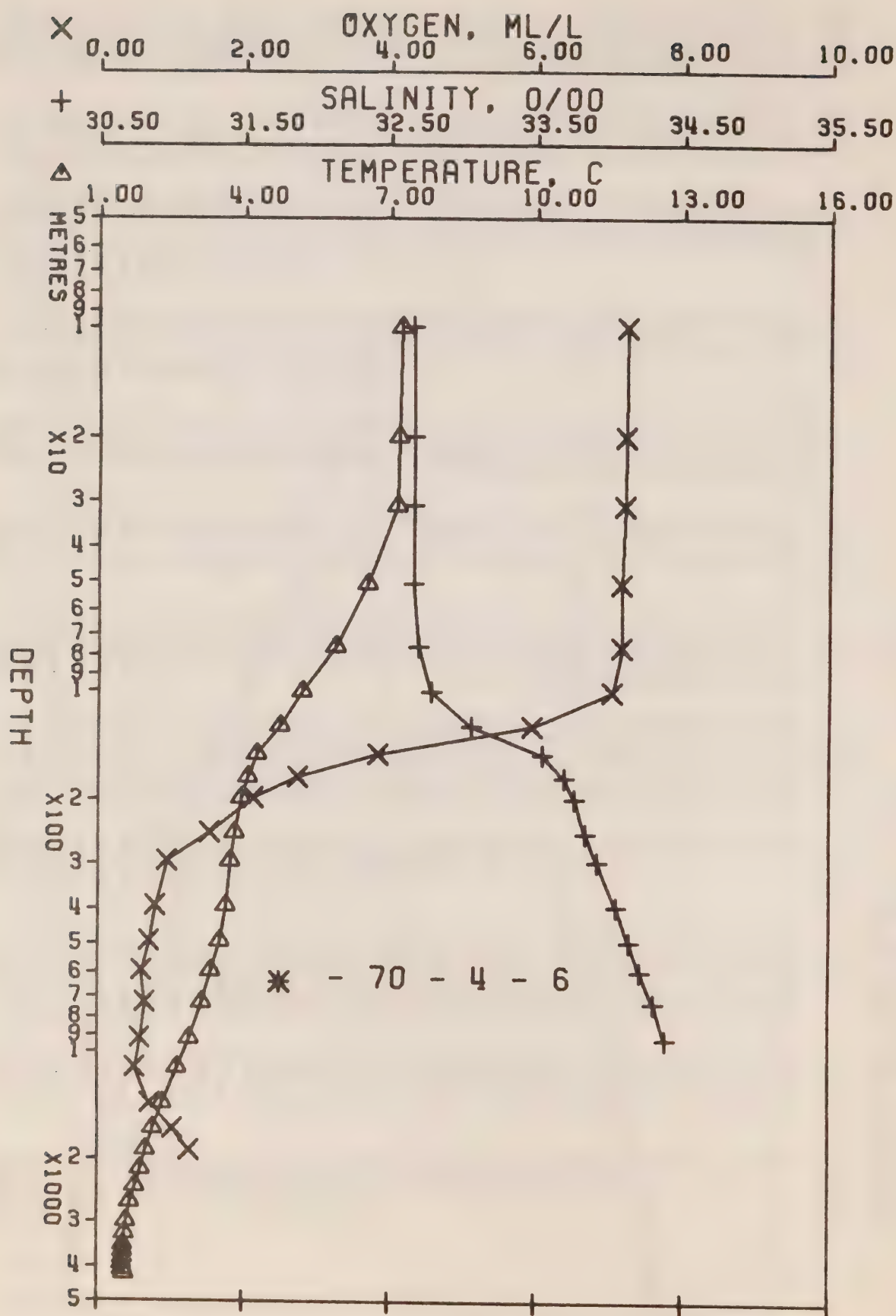
## PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 5 DATE 1/ 6/70

POSITION 50- 5.0 N, 145- 1.0 W GMT 20.5

## HYDROGRAPHIC CAST DATA

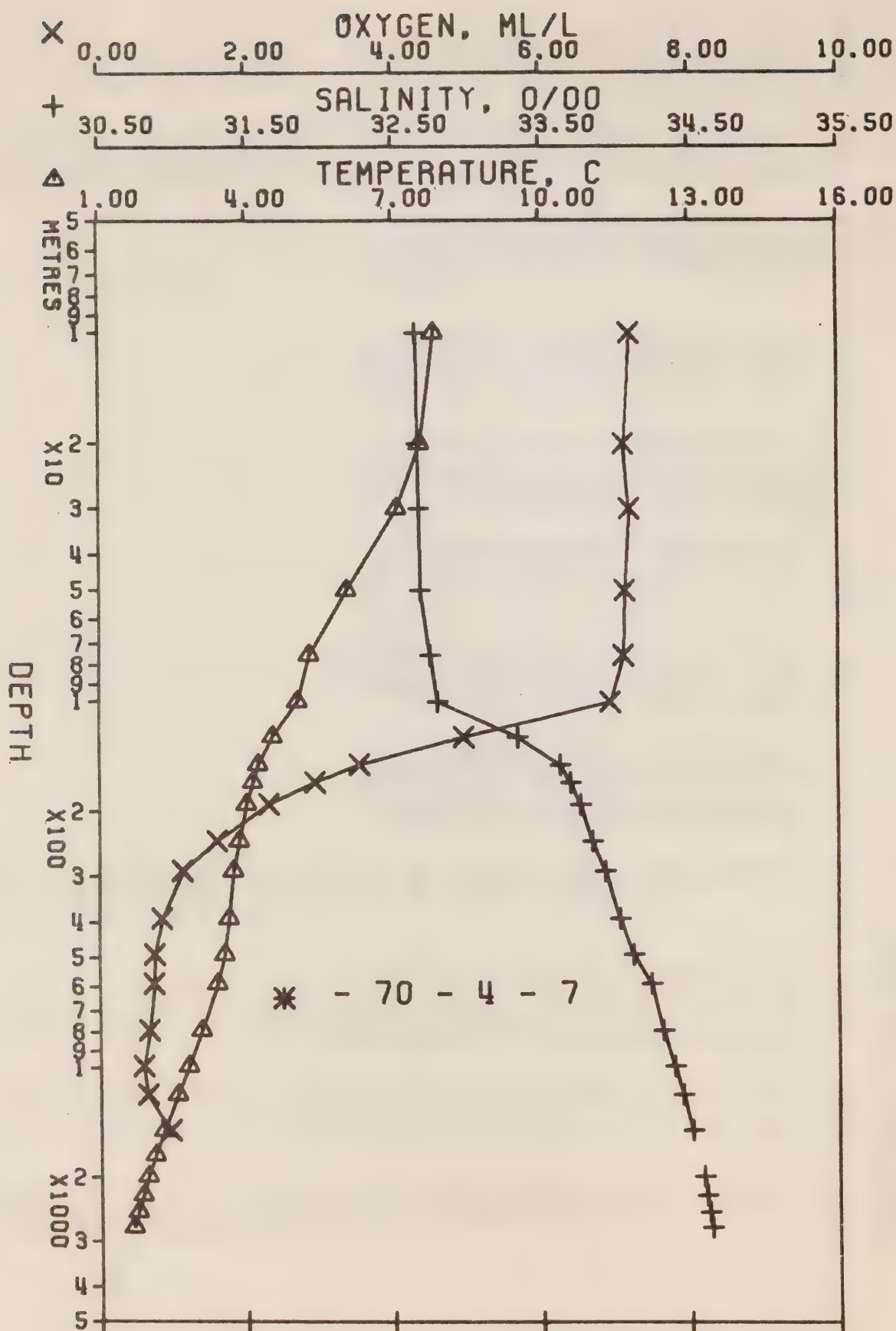
PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	POT. EN	OXY	SOUND
0	7.07	32.646	0	25.582	241.6	7.07	241.4	0.0	0.0	7.29	1476.
10	6.97	32.644	10	25.594	240.6	6.97	240.2	0.24	0.01	7.30	1476.
19	6.86	32.645	19	25.609	239.2	6.86	238.7	0.46	0.04	7.28	1476.
29	6.31	32.665	29	25.696	231.0	6.31	230.5	0.70	0.10	7.36	1474.
48	6.11	32.668	48	25.723	228.7	6.11	227.9	1.14	0.28	7.13	1473.
72	5.39	32.723	72	25.853	216.6	5.38	215.5	1.67	0.61	7.17	1471.
98	5.03	32.805	97	25.959	206.7	5.02	205.5	2.21	1.07	7.04	1470.
122	4.58	33.137*	121	26.271	177.1	4.57	175.8	2.68	1.59	5.38	1469.
146	4.32	33.495	145	26.582	147.8	4.31	146.2	3.07	2.13	4.13	1469.
171	4.12	33.657	170	26.731	133.9	4.11	132.0	3.42	2.69	3.11	1468.
196	3.97	33.733	195	26.807	126.8	3.96	124.9	3.75	3.31	2.47	1468.
246	3.75	33.833	244	26.909	117.5	3.73	115.2	4.35	4.66	1.44	1468.
295	3.71	33.909	293	26.973	111.8	3.69	109.1	4.91	6.22	1.07	1469.
396	3.63	34.036	393	27.082	102.2	3.60	98.7	5.99	10.02	0.86	1470.
497	3.52	34.141	493	27.176	94.0	3.49	89.7	6.98	14.51	0.62	1472.
598	3.41	34.192	593	27.227	89.8	3.37	84.8	7.90	19.68	0.60	1473.
808	3.07	34.321	801	27.362	78.1	3.01	71.9	9.67	32.31	0.54	1475.
1010	2.80	34.397	1000	27.447	70.8	2.73	63.8	11.16	46.15	0.59	1477.
1211	2.57	34.452	1199	27.511	65.4	2.49	57.6	12.53	61.65	0.64	1480.
1515	2.29	34.514	1498	27.584	59.2	2.19	50.6	14.41	87.79	0.79	1484.
1769	2.10	34.553	1748	27.630	55.2	1.98	46.1	15.86	112.05	1.05	1487.
2024	1.94	34.588	1999	27.671	51.8	1.80	42.1	17.22	138.36	1.34	1491.
2280	1.84	34.606	2251	27.693	50.2	1.68	39.9	18.53	167.02	0.0	1495.
2539	1.73	34.630	2505	27.721	47.9	1.55	37.1	19.80	198.19	0.0	1499.
2799	1.65	34.645	2760	27.739	46.6	1.45	35.3	21.02	231.60	0.0	1503.
3040	1.58	34.656	2996	27.753	45.6	1.35	33.9	22.13	264.65	0.0	1507.
3292	1.55	34.663*	3242	27.760	45.5	1.30	33.0	23.28	301.57	0.0	1511.
3545	1.54	34.668	3489	27.765	45.7	1.26	32.4	24.43	341.72	0.0	1515.
3697	1.53	34.672	3638	27.769	45.6	1.24	31.9	25.13	367.42	0.0	1518.
3852	1.52	34.678*	3789	27.775	45.5	1.21	31.3	25.83	394.53	0.0	1520.
4007	1.51	34.680	3940	27.777	45.5	1.19	30.9	26.53	422.70	0.0	1523.
4163	1.53	34.672	4092	27.769	46.8	1.19	31.6	27.26	452.72	0.0	1526.
4268	1.55	34.681	4194	27.775	46.8	1.20	30.9	27.75	473.80	0.0	1527.



PACIFIC OCEANOGRAPHIC GROUP  
 REFERENCE NO. 70- 4- 6 DATE 8/ 6/70  
 POSITION 49-55.0 N, 144-55.0 W GMT 20.5  
 HYDROGRAPHIC CAST DATA

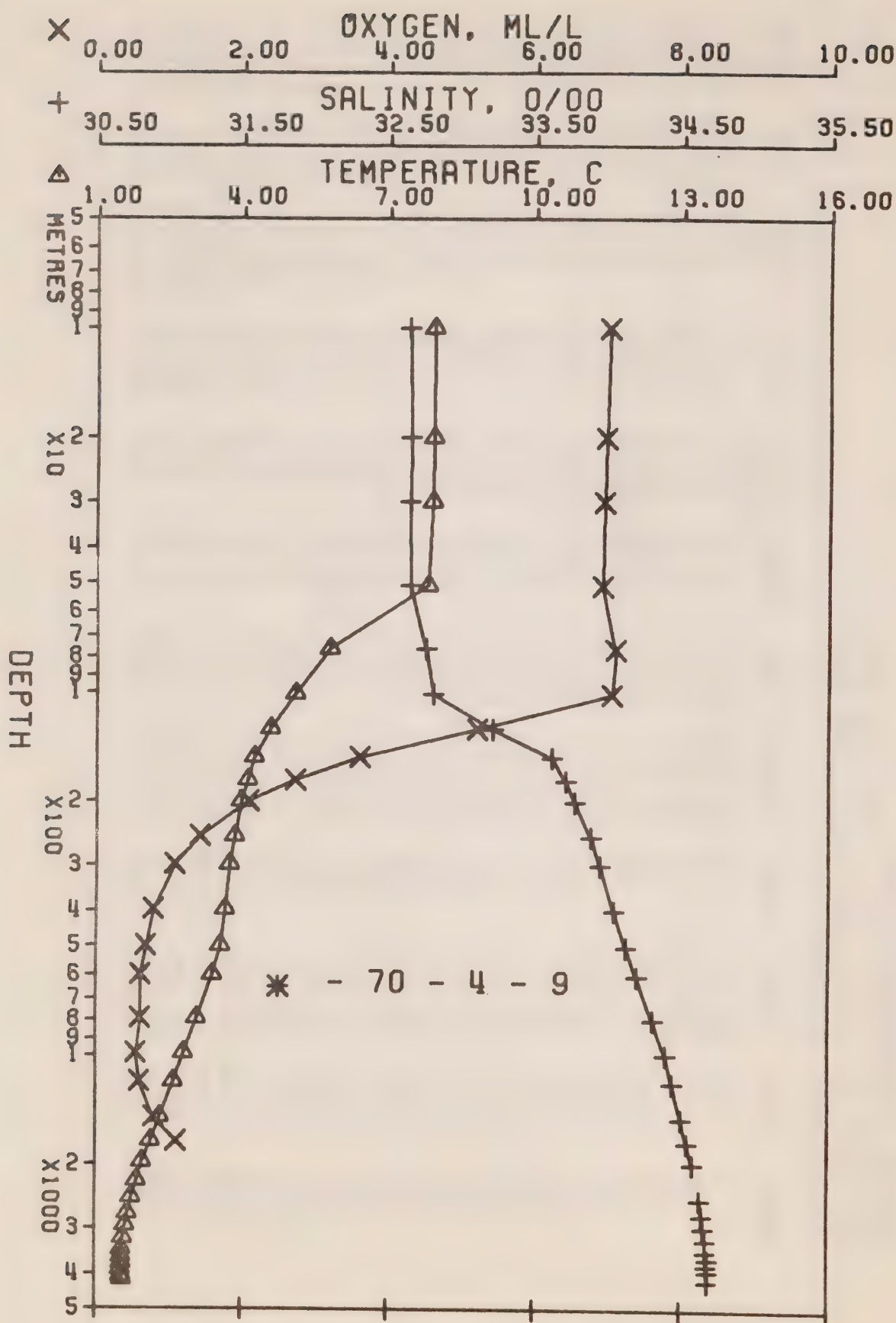
PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	POT. EN	OXY	SOUND
0	7.27	32.667	0	25.571	242.6	7.27	242.4	0.0	0.0	7.13	1477.
10	7.23	32.666	10	25.576	242.3	7.23	241.9	0.24	0.01	7.24	1477.
20	7.17	32.665	20	25.583	241.8	7.17	241.2	0.49	0.05	7.22	1477.
31	7.13	32.666	31	25.589	241.3	7.13	240.6	0.75	0.12	7.21	1477.
51	6.54	32.667	51	25.668	234.0	6.54	233.1	1.23	0.32	7.17	1475.
76	5.87	32.702	76	25.780	223.7	5.86	222.5	1.81	0.70	7.17	1473.
102	5.18	32.788	101	25.928	209.6	5.17	208.4	2.36	1.19	7.04	1470.
127	4.73	33.066	126	26.198	184.2	4.72	182.6	2.86	1.78	5.95	1469.
152	4.25	33.548	151	26.631	143.1	4.24	141.5	3.27	2.36	3.84	1468.
176	4.07	33.701	175	26.771	130.1	4.06	128.2	3.59	2.90	2.74	1468.
201	3.94	33.770	200	26.839	123.8	3.93	121.8	3.91	3.52	2.13	1468.
251	3.81	33.846	249	26.913	117.1	3.79	114.8	4.51	4.88	1.53	1469.
300	3.71	33.925	298	26.986	110.6	3.69	107.9	5.07	6.46	0.94	1469.
400	3.62	34.053	397	27.096	100.9	3.59	97.3	6.12	10.22	0.78	1471.
501	3.51	34.144	497	27.179	93.7	3.48	89.4	7.10	14.73	0.70	1472.
605	3.32	34.219	600	27.257	86.9	3.28	82.0	8.04	20.02	0.60	1473.
744	3.15	34.315	737	27.350	78.9	3.10	73.1	9.18	27.89	0.65	1474.
936	2.89	34.397	927	27.439	71.3	2.83	64.6	10.62	40.18	0.58	1477.
936	2.89	34.397	927							0.58	
1130	2.63	0.0	1118							0.51	
1425	2.32	0.0	1409							0.72	
1674	2.13	0.0	1654							1.03	
1926	1.97	0.0	1902							1.26	
2182	1.87	0.0	2154							0.0	
2441	1.76	0.0	2408							0.0	
2703	1.66	0.0	2665							0.0	
3059	1.59	0.0	3014							0.0	
3310	1.55	0.0	3259							0.0	
3563	1.53	0.0	3506							0.0	
3716	1.53	0.0	3656							0.0	
3870	1.52	0.0	3806							0.0	
4025	1.51	0.0	3957							0.0	
4182	1.53	0.0	4110							0.0	
4287	1.55	0.0	4212							0.0	





PACIFIC OCEANOGRAPHIC GROUP  
 REFERENCE NO. 70- 4- 7 DATE 15/ 6/70  
 POSITION 50- 0.0 N, 145- 2.0 W GMT 20.6  
 HYDROGRAPHIC CAST DATA

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	POT. EN	OXY	SOUND
0	7.95	32.653	0	25.464	252.7	7.95	252.5	0.0	0.0	7.17	1480.
10	7.84	32.663	10	25.488	250.6	7.84	250.2	0.25	0.01	7.21	1479.
20	7.56	32.675	20	25.537	246.1	7.56	245.6	0.50	0.05	7.13	1479.
30	7.07	32.686	30	25.613	239.0	7.07	238.4	0.75	0.11	7.21	1477.
50	6.04	32.689	50	25.749	226.3	6.04	225.5	1.22	0.31	7.14	1473.
75	5.28	32.760	75	25.895	212.6	5.27	211.5	1.77	0.66	7.12	1470.
101	5.03	32.809	100	25.962	206.3	5.02	205.2	2.30	1.14	6.94	1470.
126	4.52	33.349	125	26.445	160.7	4.51	159.3	2.76	1.67	4.96	1469.
150	4.22	33.634	149	26.703	136.4	4.21	134.8	3.12	2.17	3.54	1468.
167	4.12	33.703	166	26.768	130.3	4.11	128.6	3.34	2.54	2.93	1468.
192	3.98	33.769	191	26.835	124.2	3.97	122.3	3.66	3.12	2.30	1468.
242	3.83	33.851	240	26.915	116.9	3.81	114.6	4.26	4.44	1.59	1469.
293	3.71	33.937	291	26.995	109.7	3.69	107.0	4.84	6.02	1.12	1469.
395	3.63	34.036	392	27.082	102.2	3.60	98.7	5.91	9.80	0.84	1470.
496	3.54	34.125	492	27.161	95.4	3.51	91.1	6.91	14.34	0.74	1472.
596	3.39	34.245	591	27.271	85.7	3.35	80.6	7.82	19.37	0.73	1473.
801	3.06	34.320	794	27.362	78.0	3.01	71.9	9.48	31.22	0.66	1475.
1002	2.79	34.395	992	27.446	70.7	2.72	63.9	10.96	44.89	0.58	1477.
1202	2.56	34.451	1190	27.511	65.2	2.48	57.6	12.32	60.16	0.64	1480.
1505	2.28	34.516	1488	27.586	58.8	2.18	50.4	14.19	85.92	0.95	1484.
1758	2.10	34.559*	1738	27.635	54.8	1.98	45.6	15.63	109.84	0.0	1487.
2013	1.94	34.590	1988	27.673	51.6	1.80	42.0	16.98	135.75	0.0	1491.
2268	1.84	34.606	2239	27.693	50.1	1.68	39.9	18.27	164.08	0.0	1495.
2526	1.73	34.624	2492	27.716	48.3	1.55	37.6	19.54	195.10	0.0	1498.
2785	1.64	34.642	2746	27.737	46.7	1.44	35.5	20.77	228.39	0.0	1502.





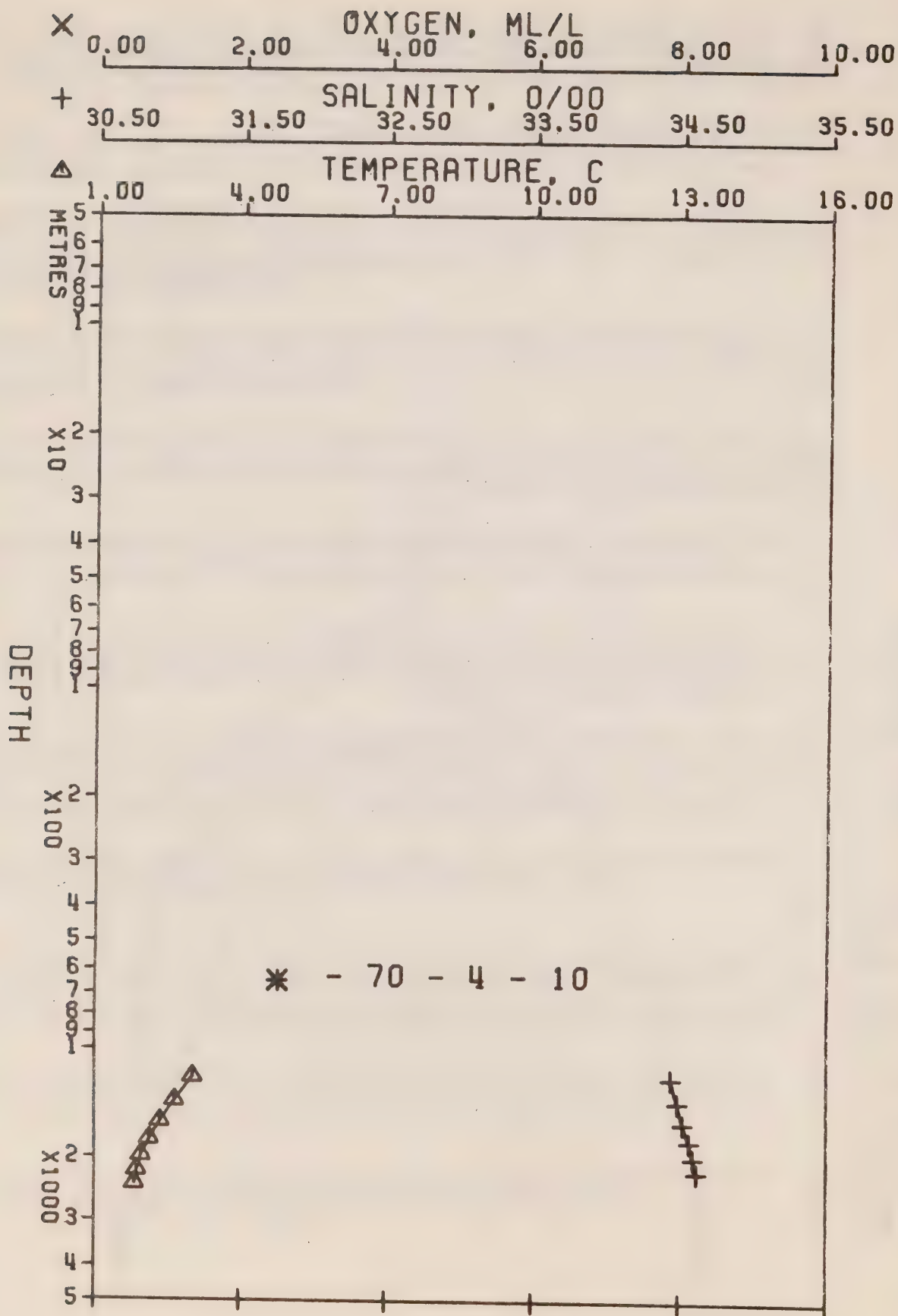
# PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 9 DATE 23/ 6/70

POSITION 50- 0.0 N, 144-57.0 W GMT 20.5

## HYDROGRAPHIC CAST DATA

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	POT. EN	OXY	SOUND
0	7.95	32.665	0	25.474	251.8	7.95	251.6	0.0	0.0	6.99	1480.
10	7.92	32.646	10	25.463	253.0	7.92	252.6	0.25	0.01	7.01	1480.
20	7.90	32.650	20	25.469	252.6	7.90	252.1	0.51	0.05	6.96	1480.
30	7.89	32.645	30	25.467	253.0	7.89	252.2	0.76	0.12	6.94	1480.
51	7.80	32.650	51	25.484	251.7	7.79	250.6	1.30	0.34	6.92	1480.
76	5.77	32.760	76	25.837	218.1	5.76	217.0	1.89	0.72	7.10	1472.
102	5.07	32.811	101	25.959	206.6	5.06	205.5	2.43	1.21	7.05	1470.
127	4.56	33.220	126	26.339	170.8	4.55	169.3	2.91	1.77	5.22	1469.
152	4.23	33.625	151	26.695	137.2	4.22	135.6	3.29	2.31	3.61	1468.
176	4.09	33.719	175	26.784	128.9	4.08	127.1	3.61	2.85	2.72	1468.
201	3.96	33.782	200	26.847	123.1	3.95	121.1	3.92	3.46	2.08	1468.
251	3.82	33.889	249	26.946	114.0	3.80	111.7	4.51	4.80	1.41	1469.
301	3.72	33.948	299	27.003	109.0	3.70	106.3	5.07	6.38	1.06	1469.
401	3.63	34.046	398	27.090	101.5	3.60	98.0	6.12	10.14	0.77	1471.
503	3.53	34.130	499	27.166	95.0	3.50	90.6	7.12	14.75	0.67	1472.
607	3.37	34.203	602	27.240	88.7	3.33	83.6	8.07	20.16	0.60	1473.
799	3.06	34.313	792	27.356	78.5	3.01	72.5	9.67	31.62	0.60	1475.
999	2.79	34.401	989	27.451	70.3	2.72	63.4	11.15	45.13	0.54	1477.
1197	2.58	34.445	1185	27.504	65.9	2.50	58.3	12.50	60.22	0.59	1480.
1496	2.29	34.507	1480	27.578	59.6	2.19	51.1	14.37	85.91	0.79	1483.
1747	2.11	34.546	1727	27.624	55.8	1.99	46.7	15.81	109.82	1.10	1487.
1998	1.93	34.585	1974	27.669	51.8	1.79	42.3	17.16	135.55	0.0	1490.
2253	1.83	34.614*	2224	27.700	49.4	1.67	39.3	18.45	163.39	0.0	1494.
2509	1.72	34.634	2475	27.725	47.4	1.54	36.8	19.68	193.40	0.0	1498.
2768	1.65	34.649	2729	27.742	46.3	1.45	35.1	20.90	225.98	0.0	1502.
3002	1.60	34.658	2958	27.753	45.7	1.38	33.9	21.97	257.60	0.0	1506.
3252	1.56	34.677	3203	27.771	44.5	1.31	32.0	23.10	293.53	0.0	1510.
3505	1.53	34.675	3450	27.772	44.9	1.26	31.8	24.23	332.45	0.0	1514.
3658	1.53	34.688	3600	27.782	44.4	1.24	30.7	24.91	357.44	0.0	1517.
3813	1.52	34.678	3751	27.775	45.4	1.22	31.3	25.61	383.89	0.0	1520.
3968	1.51	34.688	3902	27.783	44.8	1.19	30.4	26.31	411.59	0.0	1522.
4125	1.53	34.687*	4055	27.781	45.7	1.19	30.5	27.02	440.87	0.0	1525.
4231	1.54	34.686	4158	27.780	46.2	1.19	30.5	27.50	461.56	0.0	1527.



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 10 DATE 30/ 6/70

POSITION 48-46.0 N, 127-40.0 W GMT 4.2

HYDROGRAPHIC CAST DATA

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	POT. EN	OXY	SOUND
1213	3.00	34.445	1200	27.467	70.7	2.91	61.7	0.0	0.0	0.0	1482.
1413	2.62	34.490	1397	27.537	64.2	2.52	55.0	1.82	14.68	0.0	1484.
1612	2.32	34.527	1594	27.592	59.0	2.21	49.8	3.05	33.65	0.0	1486.
1813	2.09	34.571	1791	27.645	54.0	1.97	44.6	4.18	53.33	0.0	1488.
2013	1.93	34.595	1988	27.677	51.2	1.79	41.6	5.22	73.79	0.0	1491.
2215	1.84	34.618	2187	27.703	49.1	1.69	39.0	6.24	95.64	0.0	1494.
2418	1.79	34.641*	2386	27.725	47.5	1.62	36.8	7.22	118.75	0.0	1497.





RESULTS OF STD CASTS

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 1

DATE 15/ 5/70

POSITION 48-33.0N, 125-33.0W GMT 22.5

RESULTS OF STP CAST 30 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	10.58	32.07	0	24.59	335.4	0.0	0.0	1489.
10	9.15	32.22	10	24.95	302.4	0.31	0.02	1484.
20	8.55	32.42	20	25.19	279.0	0.61	0.06	1482.
30	8.01	32.61	30	25.42	257.3	0.87	0.13	1480.
50	7.65	33.00	50	25.78	223.2	1.35	0.32	1480.
75	7.28	33.43	75	26.17	187.1	1.86	0.64	1479.
100	6.83	33.71	99	26.45	160.5	2.29	1.03	1478.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	10.58	32.07	29.	8.03	32.60
2.	9.80	32.09	30.	8.01	32.61
3.	9.60	32.12	38.	7.70	32.86
5.	9.44	32.16	42.	7.73	32.91
9.	9.34	32.21	45.	7.67	32.96
10.	9.15	32.22	55.	7.63	33.05
11.	9.00	32.23	58.	7.57	33.12
15.	8.92	32.31	63.	7.52	33.21
17.	8.83	32.35	64.	7.46	33.28
18.	8.66	32.37	71.	7.33	33.37
19.	8.62	32.41	78.	7.24	33.47
22.	8.40	32.43	80.	7.15	33.50
23.	8.20	32.44	85.	7.00	33.60
25.	8.16	32.50	90.	6.95	33.62
27.	8.17	32.51	100.	6.83	33.71



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 2

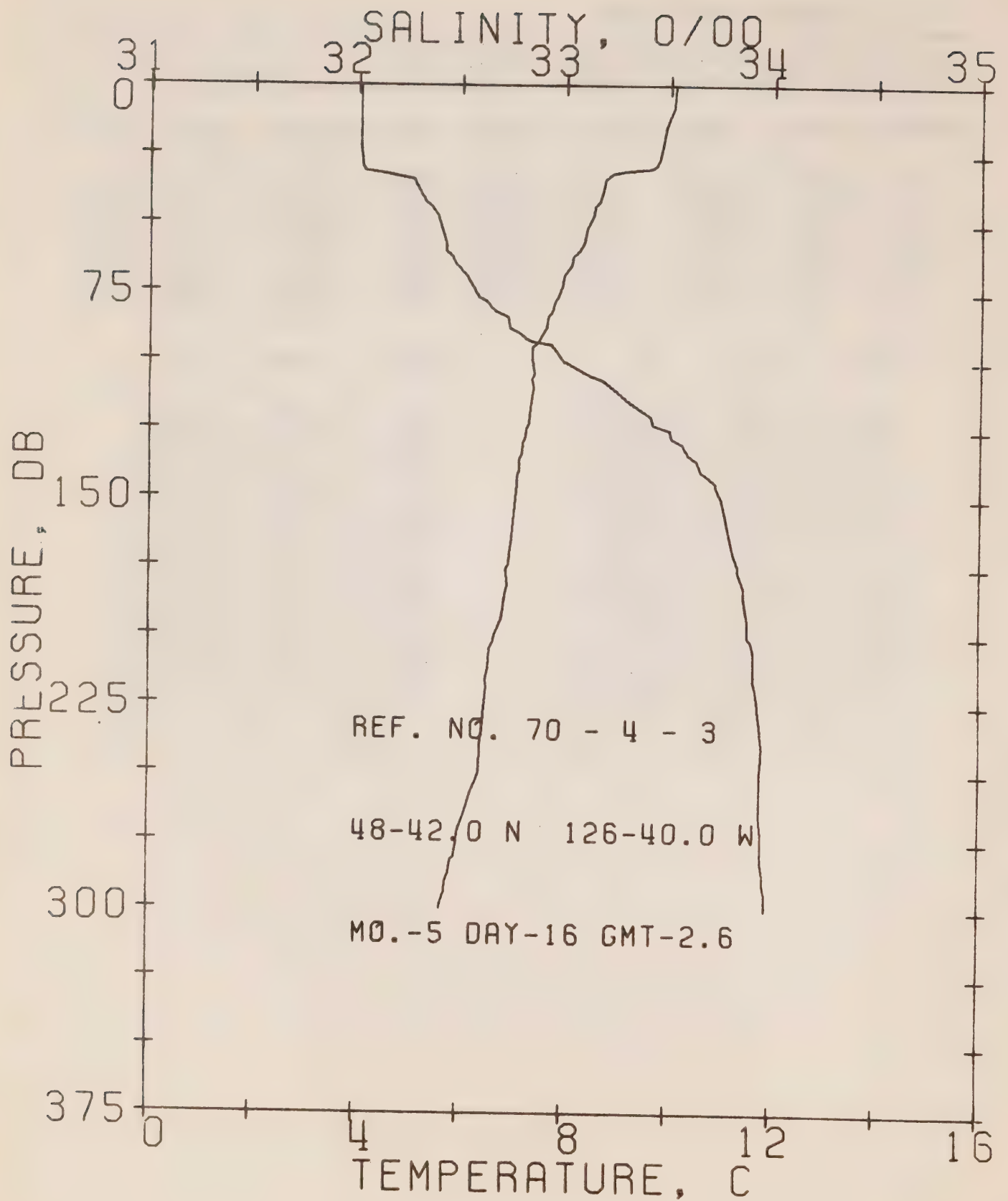
DATE 16/ 5/70

POSITION 48-38.0N, 126- 0.0W GMT 0.5

RESULTS OF STP CAST 27 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	10.30	31.87	0	24.49	345.7	0.0	0.0	1487.
10	10.14	31.88	10	24.52	343.1	0.34	0.02	1487.
20	9.61	31.91	20	24.63	332.1	0.68	0.07	1485.
30	8.25	32.51	30	25.31	268.1	0.99	0.15	1481.
50	7.69	32.91	50	25.71	230.6	1.47	0.34	1480.
75	7.25	33.31	75	26.08	195.6	2.00	0.68	1479.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	10.30	31.87	40.	7.90	32.82
5.	10.30	31.87	41.	7.85	32.83
7.	10.18	31.87	46.	7.74	32.88
12.	10.11	31.88	52.	7.67	32.93
13.	9.82	31.88	56.	7.53	33.03
15.	9.95	31.89	60.	7.50	33.10
17.	9.68	31.90	65.	7.38	33.18
21.	9.59	31.92	70.	7.35	33.22
22.	9.41	31.94	72.	7.28	33.27
25.	9.00	32.03	79.	7.22	33.36
27.	8.50	32.33	82.	7.06	33.45
30.	8.25	32.51	88.	7.01	33.52
32.	8.00	32.62	92.	6.98	33.55
34.	7.92	32.76			



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 3

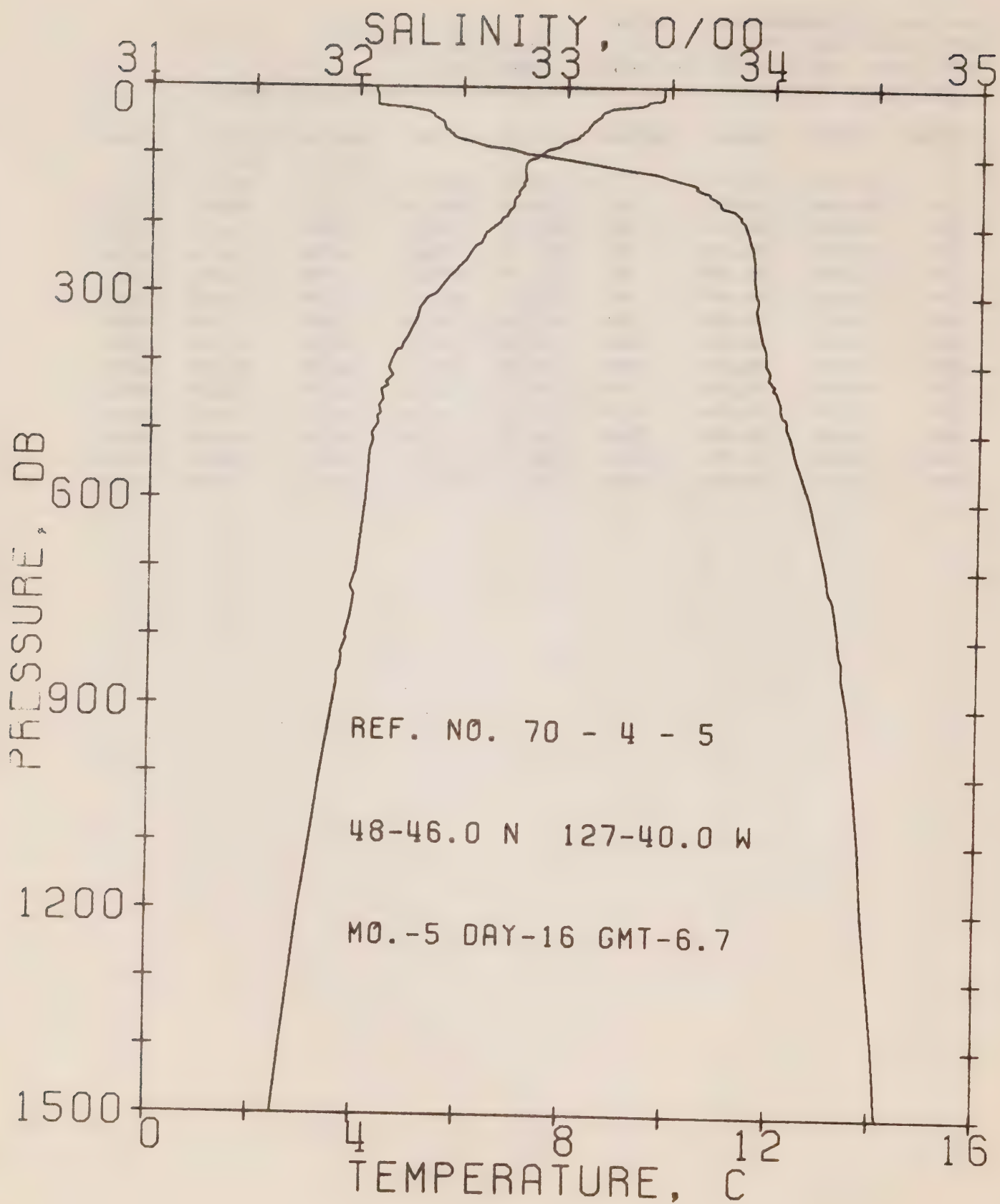
DATE 16/ 5/70

POSITION 48-42.0N, 126-40.0W GMT 2.6

RESULTS OF STP CAST 79 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	10.10	32.01	0	24.63	332.1	0.0	0.0	1487.
10	10.04	32.01	10	24.64	331.5	0.33	0.02	1487.
20	9.89	32.01	20	24.66	329.3	0.66	0.07	1486.
30	9.68	32.03	30	24.71	324.8	0.99	0.15	1486.
50	8.48	32.40	50	25.19	279.6	1.57	0.39	1482.
75	7.91	32.57	75	25.41	259.1	2.25	0.82	1481.
100	7.37	33.00	99	25.82	220.5	2.85	1.35	1480.
125	7.28	33.51	124	26.23	181.7	3.35	1.92	1480.
150	7.08	33.76	149	26.46	160.8	3.78	2.52	1480.
175	6.92	33.84	174	26.54	153.1	4.17	3.17	1480.
200	6.70	33.89	199	26.61	146.8	4.55	3.89	1480.
225	6.51	33.94	223	26.67	141.0	4.90	4.66	1479.
250	6.40	33.95	248	26.70	139.1	5.25	5.50	1479.
300	5.65	33.98	298	26.81	128.1	5.92	7.37	1477.





PACIFIC OCEANOGRAPHIC GROUP

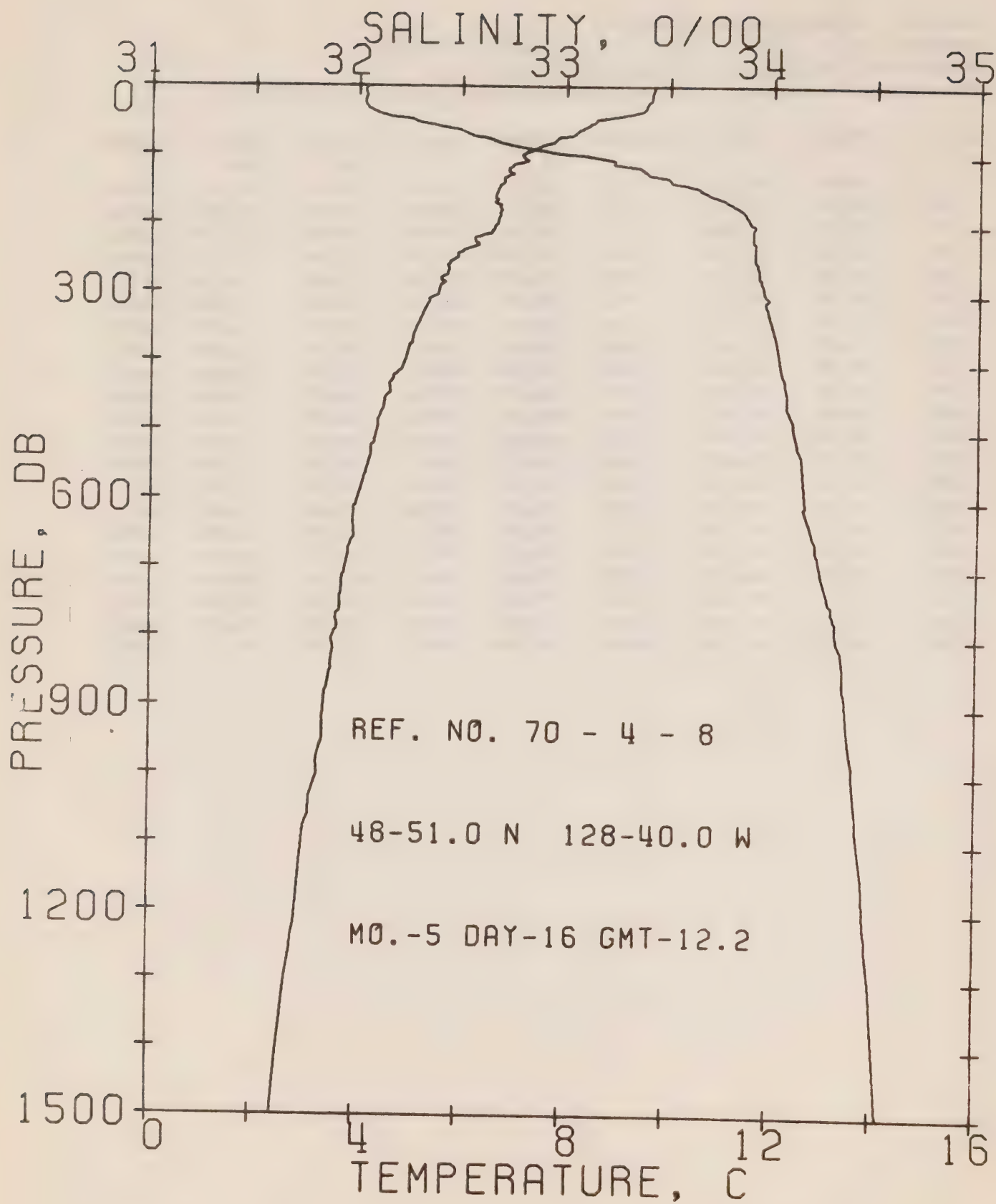
REFERENCE NO. 70- 4- 5

DATE 16/ 5/70

POSITION 48-46.0N, 127-40.0W GMT 6.7

RESULTS OF STP CAST 90 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	9.87	32.08	0	24.72	323.3	0.0	0.0	1486.
10	9.86	32.09	10	24.73	322.8	0.32	0.02	1486.
20	9.59	32.09	20	24.77	318.8	0.65	0.07	1485.
30	8.90	32.24	30	25.00	297.5	0.96	0.15	1483.
50	8.50	32.41	50	25.19	279.4	1.53	0.38	1482.
75	8.15	32.50	75	25.31	268.4	2.22	0.82	1481.
100	7.46	32.91	99	25.74	228.3	2.84	1.37	1480.
125	7.21	33.43	124	26.18	186.3	3.36	1.96	1480.
150	7.09	33.66	149	26.38	168.3	3.80	2.58	1480.
175	6.96	33.79	174	26.49	157.6	4.21	3.25	1480.
200	6.66	33.87	199	26.60	148.1	4.59	3.98	1479.
225	6.39	33.89	223	26.65	143.1	4.95	4.76	1479.
250	6.10	33.91	248	26.70	138.3	5.30	5.61	1478.
300	5.52	33.92	298	26.78	131.0	5.98	7.50	1477.
400	4.65	33.97	397	26.92	118.2	7.22	11.91	1475.
500	4.33	34.08	496	27.05	107.1	8.34	17.08	1475.
600	4.19	34.19	595	27.15	98.5	9.37	22.82	1476.
800	3.80	34.33	793	27.30	85.3	11.21	35.87	1478.
1000	3.36	34.41	991	27.41	76.0	12.82	50.59	1480.
1200	2.96	34.46	1188	27.48	69.0	14.26	66.78	1481.
1500	2.47	34.54	1484	27.59	59.2	16.18	93.08	1484.





PACIFIC OCEANOGRAPHIC GROUP

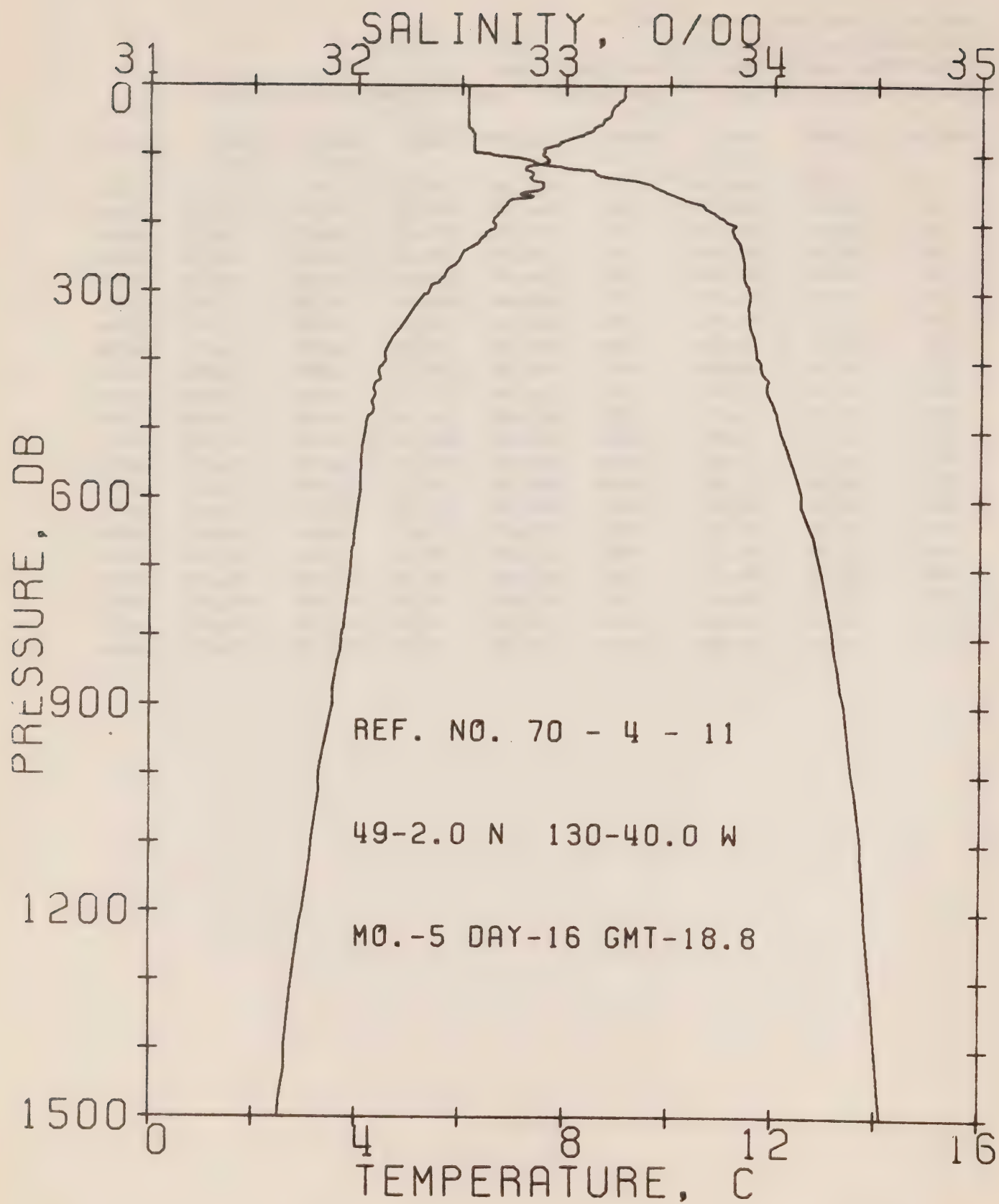
REFERENCE NO. 70- 4- 8

DATE 16/ 5/70

POSITION 48-51.0N, 128-40.0W GMT 12.2

RESULTS OF STP CAST 147 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	9.68	32.04	0	24.72	323.3	0.0	0.0	1485.
10	9.68	32.03	10	24.72	324.2	0.32	0.02	1486.
20	9.65	32.03	20	24.72	324.1	0.65	0.07	1486.
30	9.56	32.04	30	24.74	322.0	0.97	0.15	1485.
50	8.60	32.27	50	25.07	290.9	1.59	0.40	1482.
75	7.86	32.63	75	25.46	254.4	2.28	0.83	1481.
100	7.16	33.08	99	25.91	211.7	2.87	1.36	1479.
125	6.95	33.39	124	26.19	186.0	3.36	1.93	1479.
150	6.72	33.66	149	26.42	163.8	3.80	2.54	1479.
175	6.75	33.83	174	26.56	151.3	4.19	3.19	1479.
200	6.69	33.91	199	26.62	145.4	4.56	3.89	1480.
225	6.27	33.91	223	26.68	140.2	4.92	4.67	1478.
250	5.89	33.92	248	26.74	135.0	5.26	5.50	1477.
300	5.58	33.97	298	26.81	128.2	5.92	7.33	1477.
400	4.93	34.04	397	26.95	115.8	7.13	11.64	1476.
500	4.39	34.11	496	27.07	105.5	8.23	16.67	1475.
600	4.03	34.17	595	27.15	98.3	9.24	22.35	1476.
800	3.56	34.33	793	27.32	82.9	11.06	35.24	1477.
1000	3.28	34.41	991	27.41	75.0	12.63	49.62	1479.
1200	2.88	34.47	1188	27.50	67.6	14.04	65.44	1481.
1500	2.42	34.54	1484	27.59	58.6	15.92	91.25	1484.



PACIFIC OCEANOGRAPHIC GROUP

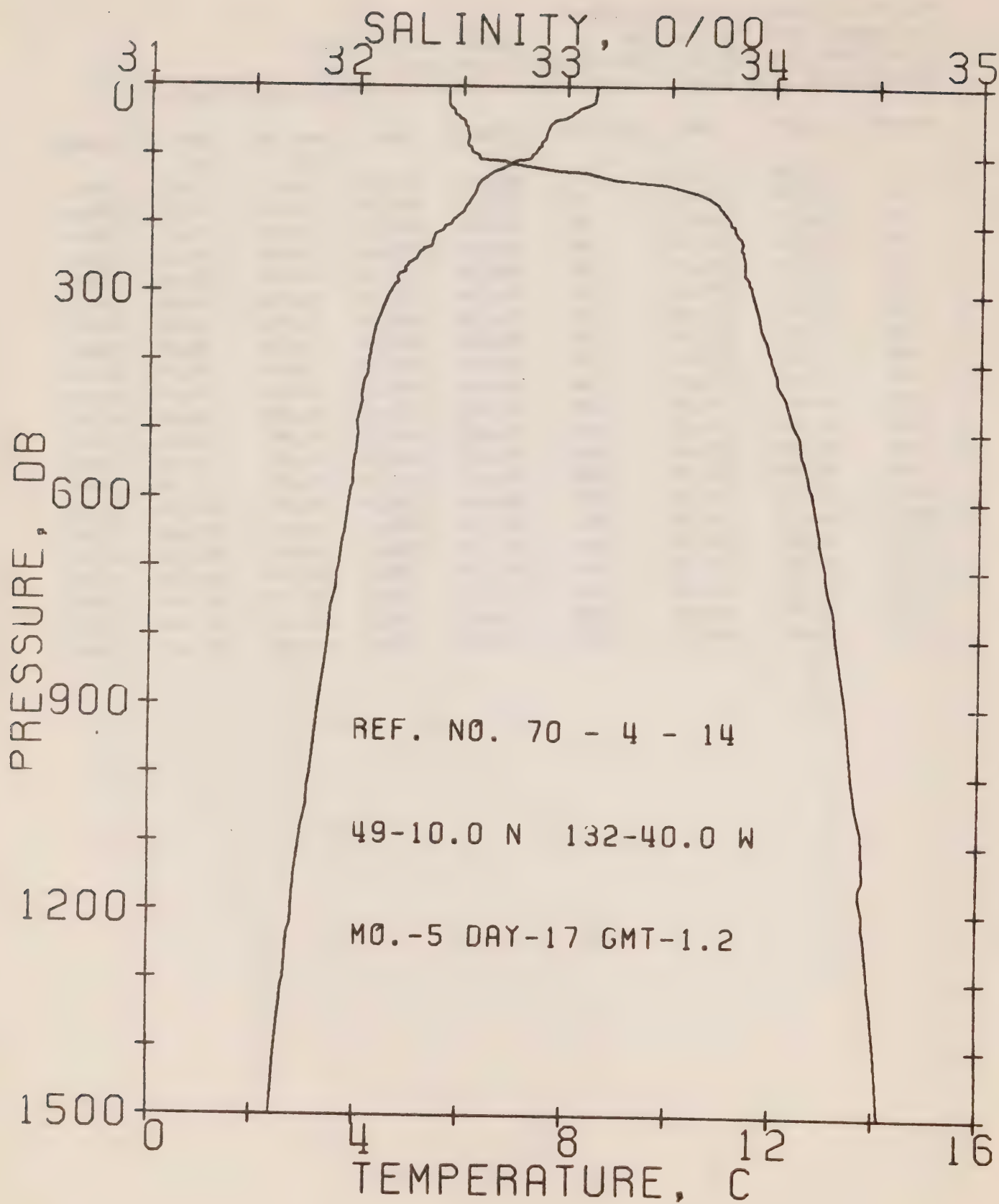
REFERENCE NO. 70- 4- 11

DATE 16/ 5/70

POSITION 49- 2.0N, 130-40.0W GMT 18.8

RESULTS OF STP CAST 140 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	9.14	32.53	0	25.19	278.7	0.0	0.0	1484.
10	9.13	32.53	10	25.19	279.0	0.28	0.01	1484.
20	9.10	32.53	20	25.19	278.7	0.56	0.06	1484.
30	8.94	32.53	30	25.22	276.6	0.84	0.13	1484.
50	8.74	32.53	50	25.25	274.0	1.39	0.35	1483.
75	8.17	32.56	75	25.36	263.9	2.06	0.78	1482.
100	7.55	32.65	99	25.52	248.9	2.71	1.36	1480.
125	7.34	33.14	124	25.94	209.9	3.28	2.01	1480.
150	7.53	33.45	149	26.15	190.0	3.78	2.71	1482.
175	6.83	33.67	174	26.42	164.5	4.22	3.44	1479.
200	6.63	33.80	199	26.55	152.6	4.62	4.20	1479.
225	6.36	33.83	223	26.61	147.0	4.99	5.01	1479.
250	5.98	33.86	248	26.68	140.8	5.35	5.88	1478.
300	5.38	33.89	298	26.77	131.7	6.03	7.79	1476.
400	4.54	33.94	397	26.91	119.2	7.29	12.25	1474.
500	4.16	34.04	496	27.03	108.6	8.43	17.46	1474.
600	4.04	34.14	595	27.12	100.5	9.47	23.28	1476.
800	3.71	34.29	793	27.28	87.1	11.33	36.52	1478.
1000	3.28	34.38	991	27.39	76.9	12.97	51.51	1479.
1200	2.98	34.45	1188	27.47	70.0	14.43	67.88	1481.
1500	2.49	34.53	1484	27.58	60.2	16.38	94.61	1484.





PACIFIC OCEANOGRAPHIC GROUP

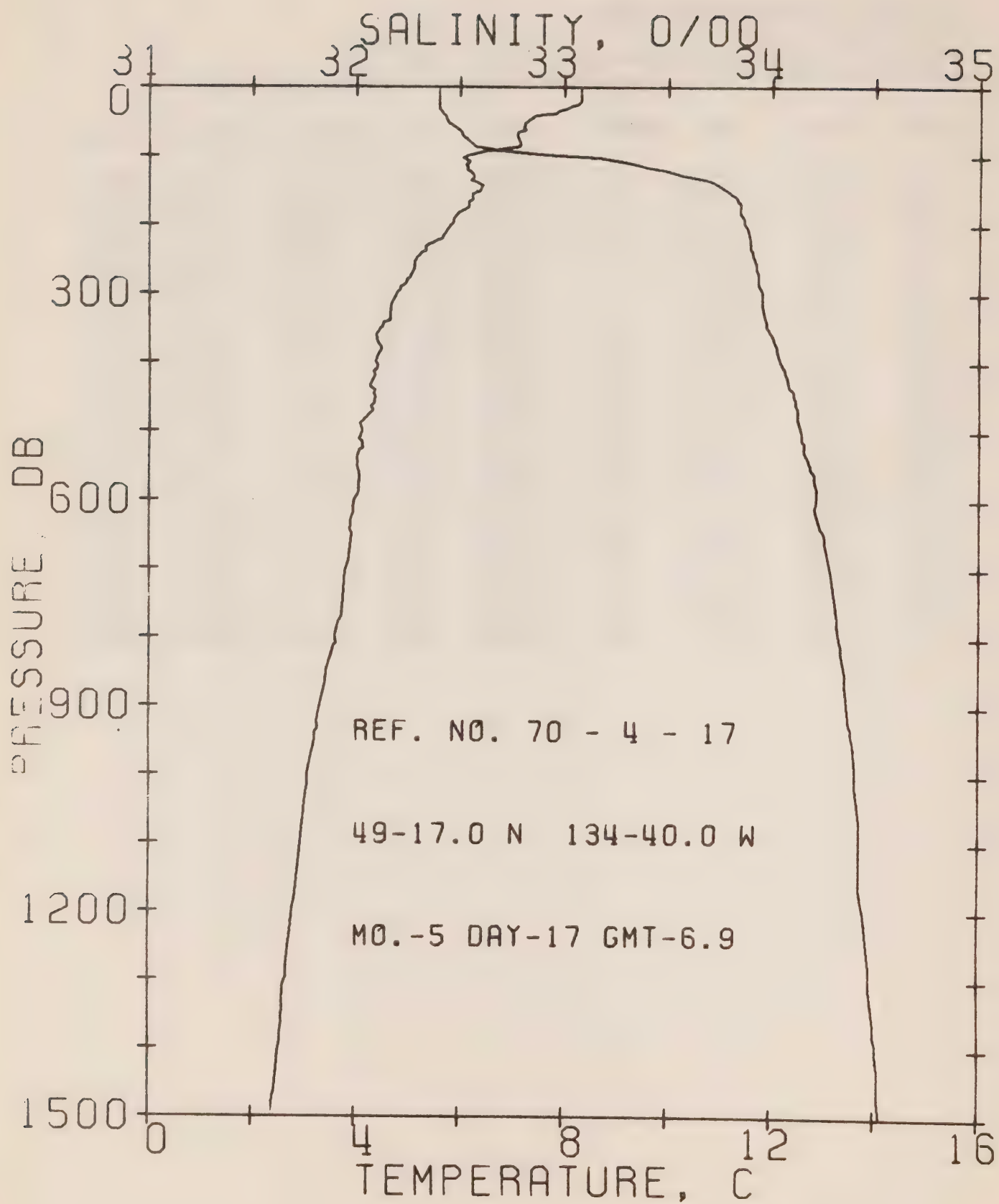
REFERENCE NO. 70- 4- 14

DATE 17/ 5/70

POSITION 49-10.0N. 132-40.0W GMT 1.2

RESULTS OF STP CAST 102 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.57	32.43	0	25.20	277.8	0.0	0.0	1482.
10	8.56	32.43	10	25.20	278.1	0.28	0.01	1482.
20	8.54	32.43	20	25.20	278.0	0.56	0.06	1482.
30	8.35	32.44	30	25.24	274.7	0.83	0.13	1481.
50	7.77	32.51	50	25.38	261.7	1.37	0.35	1480.
75	7.60	32.53	75	25.42	258.2	2.02	0.76	1479.
100	7.34	32.58	99	25.49	251.4	2.66	1.33	1479.
125	6.59	33.09	124	25.99	204.0	3.24	2.00	1477.
150	6.27	33.58	149	26.42	163.7	3.70	2.64	1477.
175	6.06	33.74	174	26.57	149.5	4.09	3.28	1477.
200	5.80	33.79	199	26.65	142.9	4.45	3.97	1476.
225	5.44	33.85	223	26.74	134.5	4.80	4.72	1475.
250	5.14	33.86	248	26.78	130.5	5.13	5.52	1474.
300	4.63	33.90	298	26.87	122.2	5.76	7.29	1473.
400	4.22	34.00	397	26.99	111.5	6.93	11.44	1473.
500	4.00	34.12	496	27.11	100.9	7.99	16.30	1474.
600	3.85	34.20	595	27.19	94.1	8.97	21.77	1475.
800	3.47	34.31	793	27.32	83.1	10.73	34.33	1477.
1000	3.13	34.39	990	27.41	74.9	12.30	48.71	1479.
1200	2.79	34.45	1188	27.49	67.8	13.71	64.47	1481.
1500	2.38	34.53	1484	27.59	58.9	15.60	90.39	1484.



PACIFIC OCEANOGRAPHIC GROUP

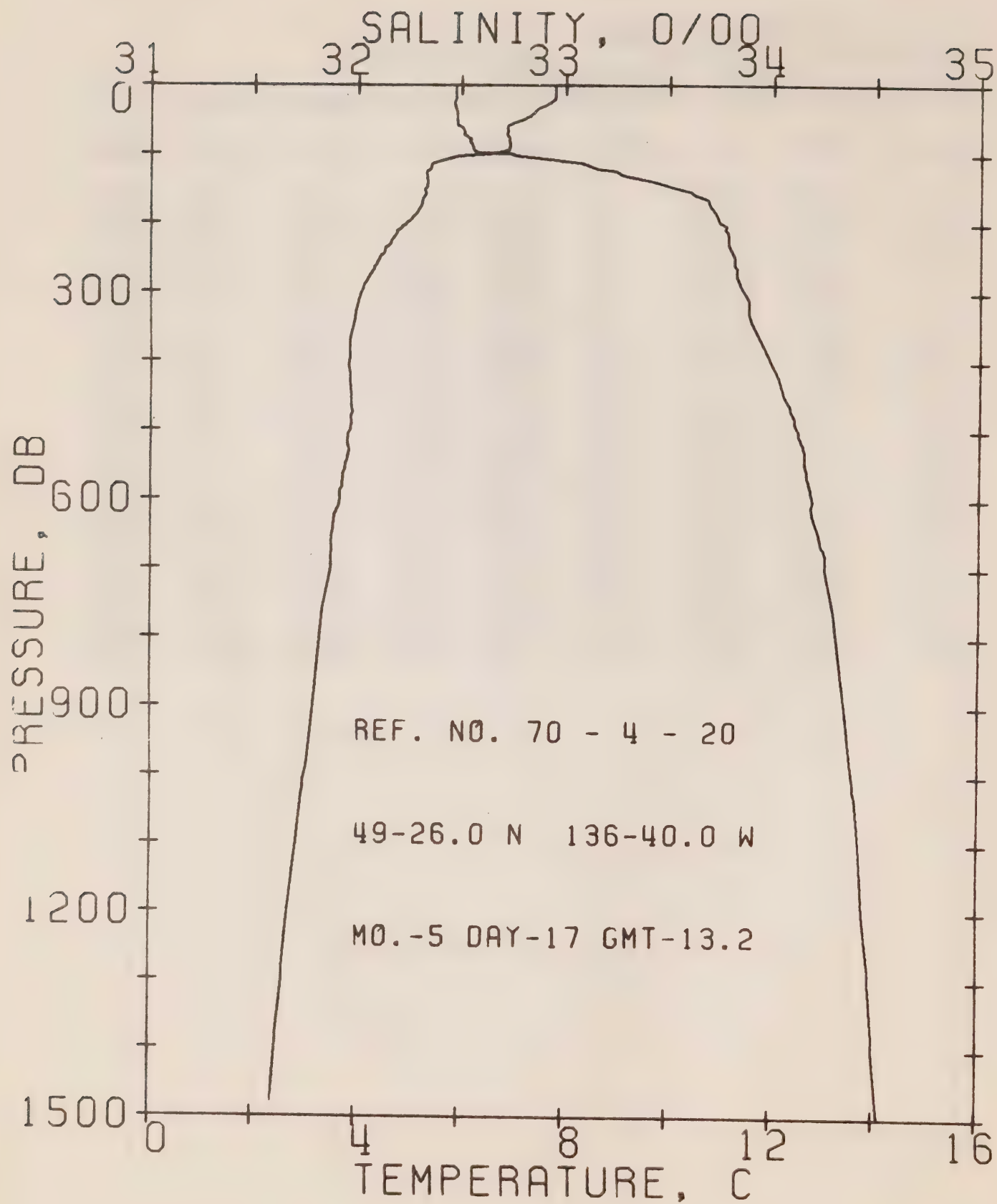
REFERENCE NO. 70- 4- 17

DATE 17/ 5/70

POSITION 49-17.0N, 134-40.0W GMT 6.9

RESULTS OF STP CAST 143 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.34	32.40	0	25.21	276.8	0.0	0.0	1481.
10	8.34	32.40	10	25.21	277.2	0.28	0.01	1481.
20	8.34	32.40	20	25.21	277.4	0.55	0.06	1481.
30	8.10	32.40	30	25.24	274.1	0.83	0.13	1480.
50	7.29	32.45	50	25.40	260.0	1.36	0.34	1478.
75	7.11	32.54	75	25.49	251.4	2.00	0.75	1477.
100	6.12	33.04	99	26.02	201.3	2.60	1.28	1475.
125	6.22	33.54	124	26.40	165.5	3.04	1.79	1476.
150	6.40	33.79	149	26.57	149.7	3.43	2.33	1478.
175	6.15	33.85	174	26.65	142.4	3.79	2.93	1477.
200	5.84	33.88	199	26.71	136.7	4.14	3.59	1476.
225	5.51	33.90	223	26.77	131.6	4.48	4.32	1475.
250	5.17	33.92	248	26.83	126.0	4.80	5.10	1474.
300	4.80	33.96	298	26.90	119.6	5.41	6.83	1474.
400	4.38	34.05	397	27.02	109.2	6.56	10.90	1474.
500	4.12	34.15	496	27.12	99.7	7.60	15.68	1474.
600	3.98	34.22	595	27.19	93.9	8.57	21.09	1476.
800	3.59	34.33	793	27.32	83.0	10.34	33.67	1477.
1000	3.07	34.41	990	27.43	72.7	11.89	47.85	1479.
1200	2.78	34.45	1188	27.49	67.6	13.30	63.65	1481.
1500	2.38	34.53	1484	27.59	58.9	15.19	89.60	1484.





PACIFIC OCEANOGRAPHIC GROUP

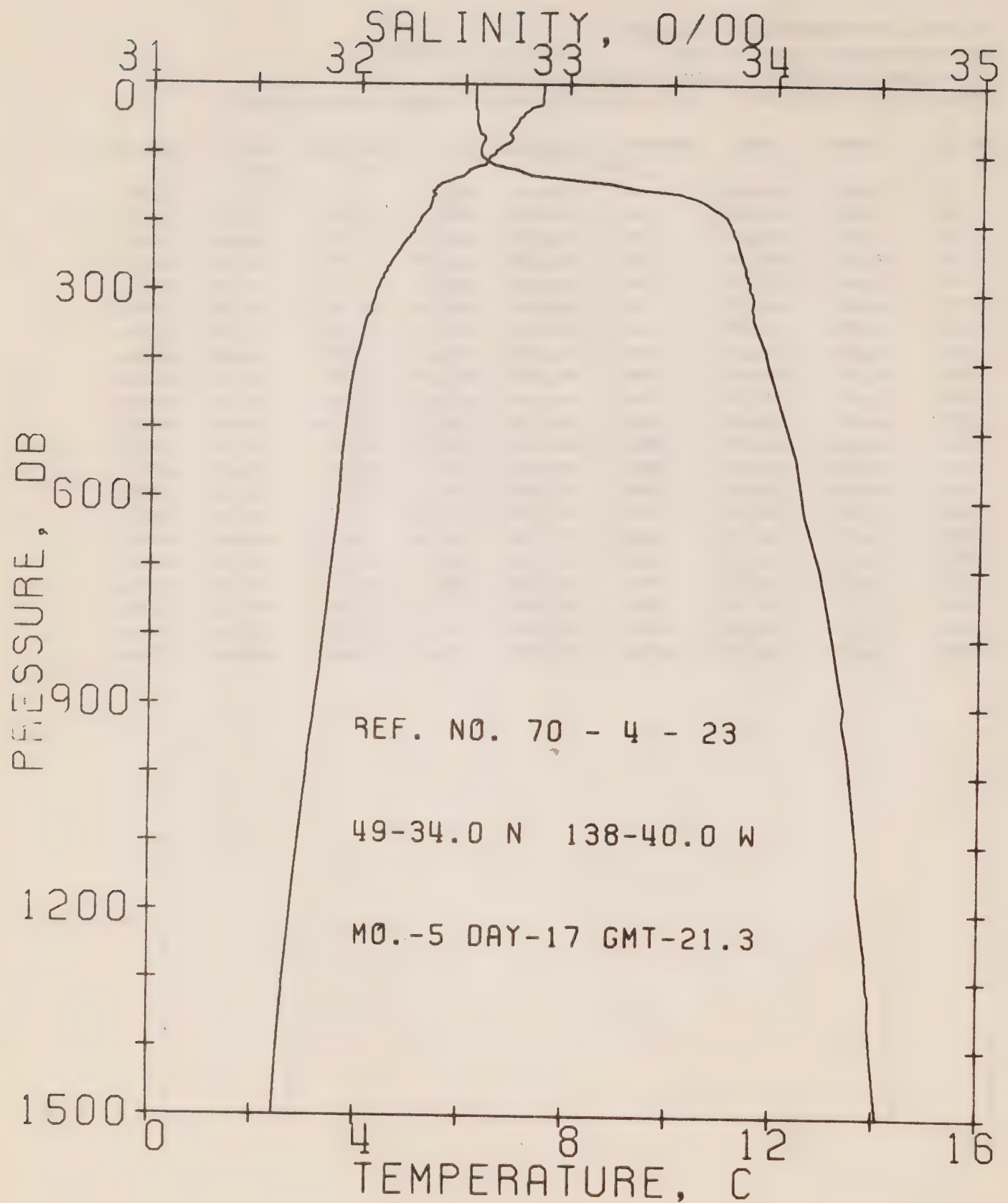
REFERENCE NO. 70- 4- 20

DATE 17/ 5/70

POSITION 49-26.0N, 136-40.0W GMT 13.2

RESULTS OF STP CAST 105 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.92	32.47	0	25.34	264.4	0.0	0.0	1479.
10	7.82	32.47	10	25.34	264.8	0.26	0.01	1479.
20	7.82	32.47	20	25.34	264.9	0.53	0.05	1479.
30	7.61	32.47	30	25.37	262.2	0.79	0.12	1479.
50	7.20	32.48	50	25.43	256.3	1.31	0.33	1477.
75	6.90	32.53	75	25.52	248.8	1.94	0.73	1477.
100	6.35	32.75	99	25.76	226.1	2.55	1.28	1475.
125	5.35	33.25	124	26.28	176.8	3.05	1.84	1472.
150	5.31	33.56	149	26.52	153.7	3.46	2.42	1473.
175	5.23	33.70	174	26.65	142.3	3.83	3.03	1473.
200	4.96	33.76	199	26.72	135.3	4.18	3.69	1472.
225	4.68	33.79	223	26.78	130.3	4.51	4.41	1472.
250	4.43	33.82	248	26.83	125.6	4.83	5.18	1471.
300	4.08	33.87	298	26.90	118.5	5.44	6.90	1471.
400	3.85	34.00	397	27.03	107.5	6.57	10.93	1471.
500	3.88	34.13	496	27.13	98.6	7.60	15.65	1473.
600	3.68	34.20	595	27.21	92.1	8.56	20.99	1474.
800	3.30	34.32	793	27.34	80.7	10.28	33.24	1476.
1000	3.01	34.40	990	27.43	73.1	11.82	47.32	1478.
1200	2.70	34.45	1188	27.50	66.9	13.21	62.91	1480.
1500	2.35	34.53	1484	27.59	58.6	15.09	88.65	1484.



PACIFIC OCEANOGRAPHIC GROUP

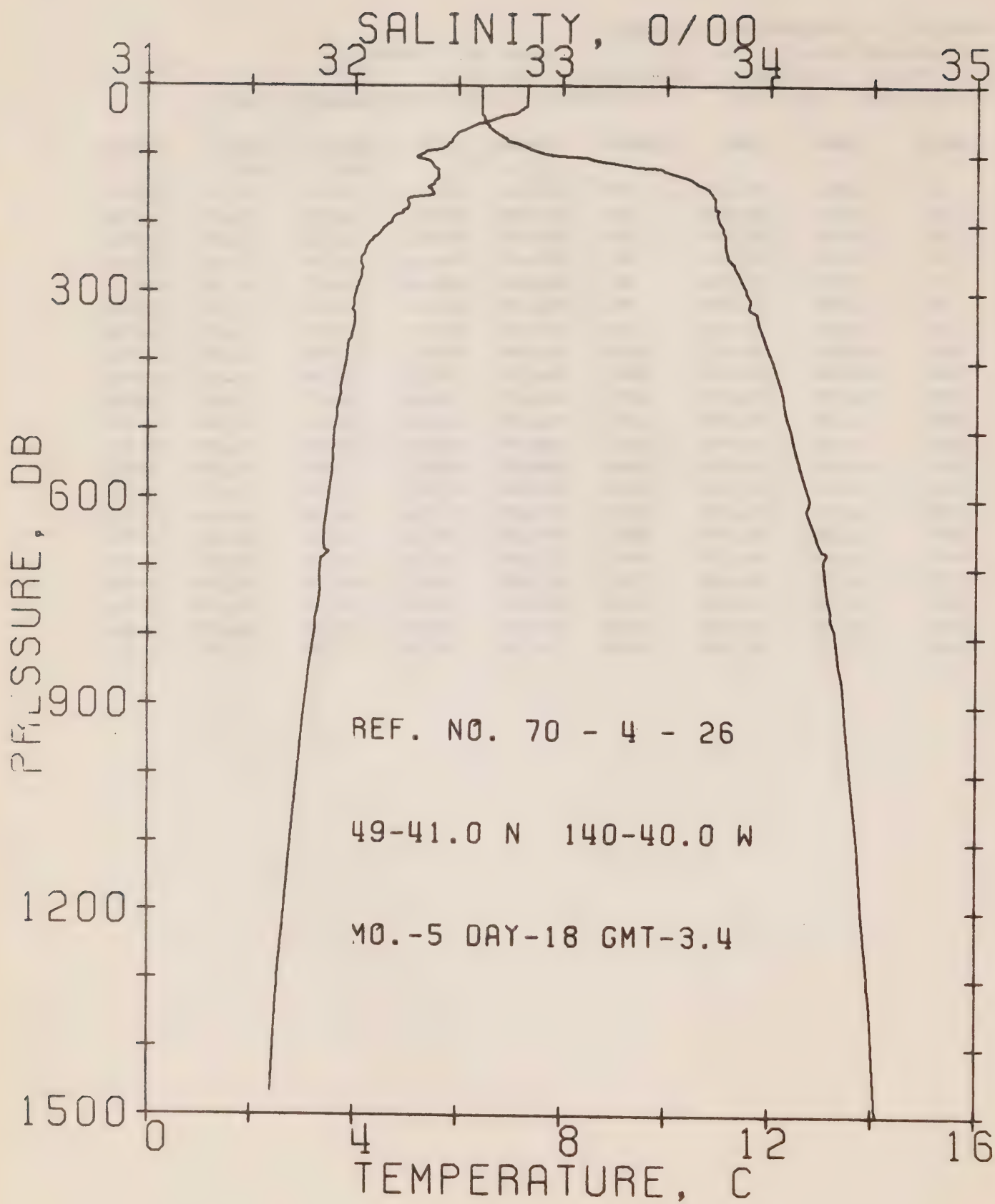
REFERENCE NO. 70- 4- 23

DATE 17/ 5/70

POSITION 49-34.0N, 138-40.0W GMT 21.3

RESULTS OF STP CAST 86 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.52	32.55	0	25.44	254.4	0.0	0.0	1478.
10	7.51	32.55	10	25.45	254.7	0.25	0.01	1478.
20	7.51	32.55	20	25.45	254.7	0.51	0.05	1478.
30	7.50	32.55	30	25.45	254.8	0.76	0.12	1478.
50	7.07	32.56	50	25.51	248.6	1.27	0.32	1477.
75	6.92	32.60	75	25.57	244.1	1.88	0.71	1477.
100	6.62	32.58	99	25.59	242.1	2.49	1.26	1476.
125	6.11	32.77	124	25.80	222.2	3.08	1.93	1475.
150	5.48	33.31	149	26.31	174.1	3.58	2.63	1473.
175	5.38	33.68	174	26.61	145.4	3.97	3.27	1474.
200	5.15	33.78	199	26.72	135.8	4.32	3.94	1473.
225	4.92	33.82	223	26.77	130.7	4.65	4.66	1473.
250	4.69	33.84	248	26.82	126.7	4.97	5.44	1472.
300	4.34	33.89	298	26.89	119.8	5.59	7.16	1472.
400	3.95	33.97	397	27.00	110.5	6.74	11.28	1472.
500	3.76	34.07	496	27.10	101.8	7.81	16.13	1473.
600	3.64	34.14	595	27.16	96.2	8.79	21.65	1474.
800	3.37	34.29	793	27.31	83.2	10.58	34.34	1476.
1000	3.04	34.38	990	27.41	74.5	12.15	48.74	1478.
1200	2.75	34.43	1188	27.48	68.7	13.58	64.71	1480.
1500	2.40	34.52	1484	27.58	59.9	15.50	91.05	1484.





PACIFIC OCEANOGRAPHIC GROUP

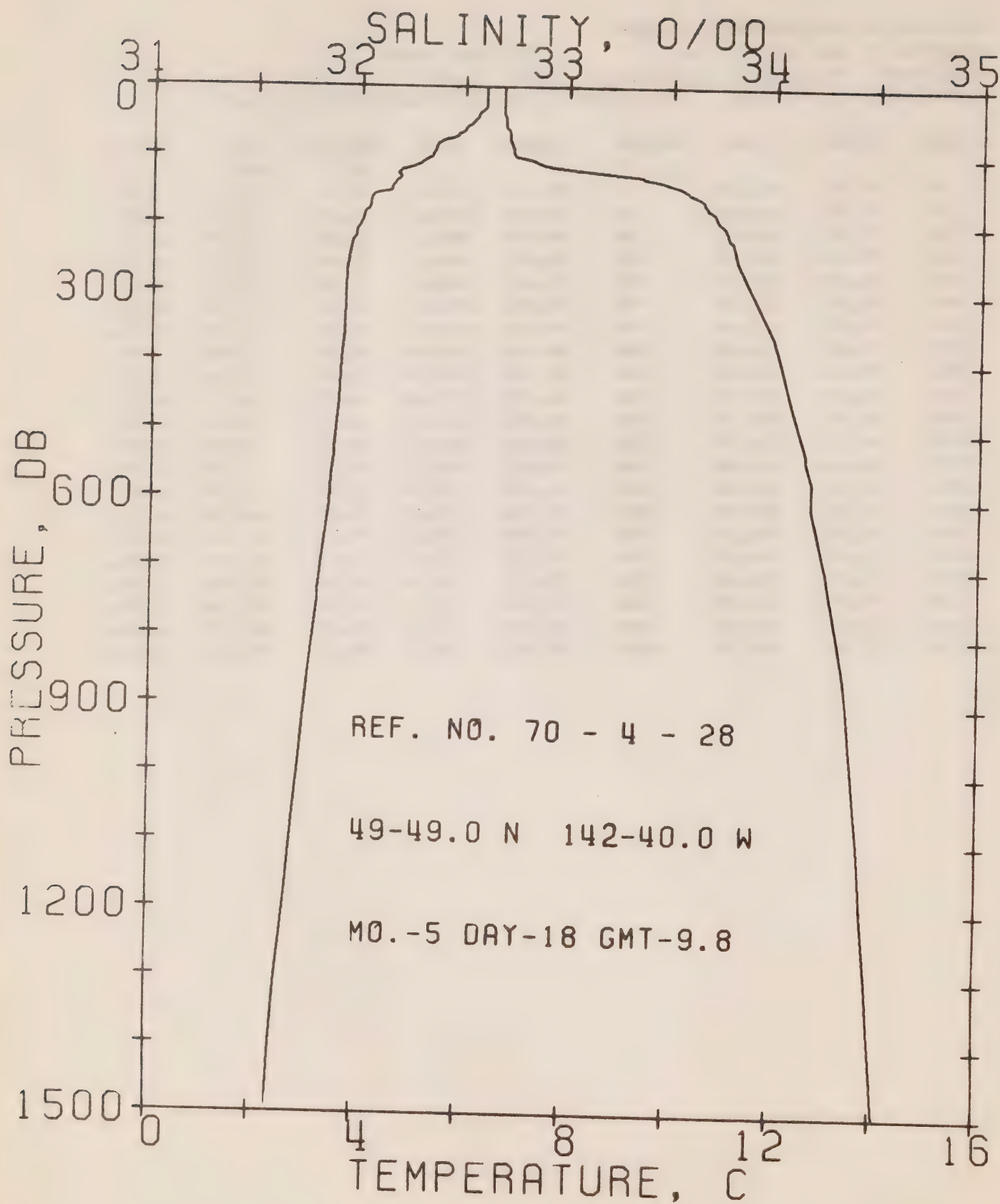
REFERENCE NO. 70- 4- 26

DATE 18/ 5/70

POSITION 49-41.0N, 140-40.0W GMT 3.4

RESULTS OF STP CAST 107 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.35	32.61	0	25.52	247.7	0.0	0.0	1477.
10	7.35	32.61	10	25.52	248.0	0.25	0.01	1477.
20	7.34	32.61	20	25.52	248.1	0.50	0.05	1478.
30	7.34	32.61	30	25.52	248.2	0.74	0.11	1478.
50	6.65	32.63	50	25.62	238.1	1.23	0.31	1475.
75	5.93	32.72	75	25.79	222.6	1.81	0.68	1473.
100	5.27	32.94	99	26.04	199.0	2.34	1.15	1471.
125	5.62	33.51	124	26.45	160.8	2.78	1.66	1474.
150	5.48	33.71	149	26.62	144.5	3.16	2.19	1474.
175	5.05	33.74	174	26.70	137.6	3.51	2.77	1472.
200	4.68	33.77	199	26.76	131.8	3.85	3.41	1471.
225	4.34	33.79	223	26.81	126.7	4.17	4.11	1470.
250	4.14	33.80	248	26.85	123.6	4.48	4.87	1470.
300	4.04	33.89	298	26.92	116.6	5.08	6.54	1470.
400	3.85	34.02	397	27.05	105.7	6.20	10.50	1471.
500	3.62	34.11	496	27.14	97.4	7.21	15.15	1472.
600	3.50	34.20	595	27.22	90.1	8.15	20.42	1473.
800	3.23	34.32	793	27.35	79.5	9.85	32.53	1476.
1000	2.91	34.39	990	27.43	72.1	11.36	46.34	1478.
1200	2.65	34.45	1188	27.50	66.3	12.74	61.75	1480.
1500	2.36	34.52	1484	27.58	59.5	14.61	87.44	1484.



PACIFIC OCEANOGRAPHIC GROUP

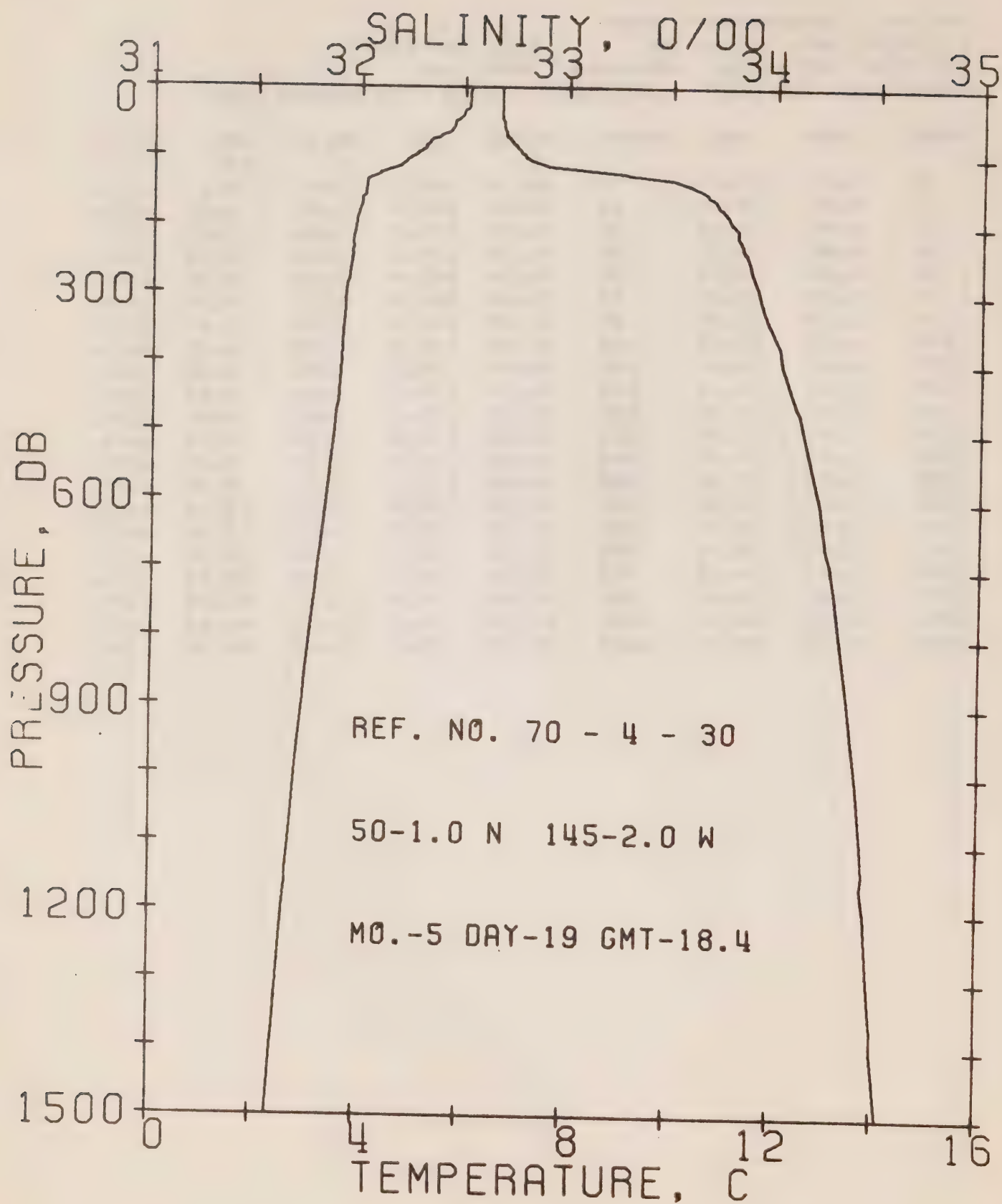
REFERENCE NO. 70- 4- 28

DATE 18/ 5/70

POSITION 49-49.0N, 142-40.0W GMT 9.8

RESULTS OF STP CAST 60 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.43	32.69	0	25.70	230.1	0.0	0.0	1474.
10	6.41	32.69	10	25.70	230.2	0.23	0.01	1474.
20	6.41	32.69	20	25.70	230.3	0.46	0.05	1474.
30	6.41	32.69	30	25.70	230.4	0.69	0.11	1474.
50	6.20	32.70	50	25.74	227.4	1.15	0.29	1474.
75	5.78	32.72	75	25.80	221.2	1.71	0.65	1472.
100	5.39	32.75	99	25.87	214.9	2.25	1.13	1471.
125	4.75	33.18	124	26.29	175.5	2.75	1.70	1470.
150	4.61	33.57	149	26.61	145.3	3.14	2.25	1470.
175	4.19	33.68	174	26.74	133.1	3.49	2.82	1469.
200	4.02	33.75	199	26.81	126.1	3.81	3.44	1469.
225	3.85	33.80	223	26.87	120.8	4.12	4.11	1468.
250	3.79	33.82	248	26.89	118.9	4.42	4.83	1468.
300	3.73	33.90	298	26.96	112.7	5.00	6.45	1469.
400	3.67	34.04	397	27.08	102.4	6.07	10.26	1471.
500	3.58	34.13	496	27.16	95.5	7.06	14.80	1472.
600	3.46	34.19	595	27.22	90.4	7.98	19.97	1473.
800	3.17	34.32	793	27.35	79.1	9.68	32.01	1476.
1000	2.91	34.40	990	27.44	71.6	11.18	45.72	1478.
1200	2.65	34.45	1188	27.50	66.3	12.55	61.11	1480.
1500	2.33	34.52	1484	27.59	59.1	14.42	86.76	1484.





PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 30

DATE 19/ 5/70

POSITION 50- 1.0N, 145- 2.0W GMT 18.4

RESULTS OF STP CAST 70 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.12	32.68	0	25.73	227.1	0.0	0.0	1472.
10	6.11	32.68	10	25.73	227.4	0.23	0.01	1473.
20	6.11	32.68	20	25.73	227.4	0.45	0.05	1473.
30	6.10	32.68	30	25.73	227.4	0.68	0.10	1473.
50	5.83	32.69	50	25.77	223.7	1.13	0.29	1472.
75	5.42	32.72	75	25.84	217.3	1.69	0.64	1471.
100	5.03	32.79	99	25.95	207.4	2.22	1.12	1470.
125	4.38	33.27	124	26.40	165.2	2.70	1.67	1468.
150	4.11	33.65	149	26.73	134.2	3.07	2.17	1468.
175	4.02	33.74	174	26.81	126.7	3.39	2.71	1468.
200	3.93	33.80	199	26.87	121.2	3.70	3.30	1468.
225	3.87	33.84	223	26.90	118.1	4.00	3.95	1468.
250	3.86	33.88	248	26.93	115.4	4.29	4.66	1469.
300	3.74	33.93	298	26.99	110.6	4.86	6.24	1469.
400	3.67	34.04	397	27.08	102.4	5.92	10.02	1471.
500	3.55	34.15	496	27.18	93.7	6.90	14.49	1472.
600	3.40	34.23	595	27.26	86.9	7.80	19.54	1473.
800	3.09	34.33	793	27.37	77.6	9.44	31.23	1475.
1000	2.83	34.41	990	27.45	70.1	10.92	44.74	1477.
1200	2.61	34.46	1188	27.51	65.1	12.27	59.86	1480.
1500	2.32	34.53	1483	27.59	58.3	14.13	85.36	1484.

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 32

DATE 19/ 5/70

POSITION 49-57.0N, 144-57.0W GMT 23.4

RESULTS OF STP CAST 32 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.11	32.68	0	25.73	227.0	0.0	0.0	1472.
10	6.10	32.69	10	25.74	226.8	0.23	0.01	1473.
20	6.09	32.69	20	25.74	226.5	0.45	0.05	1473.
30	6.07	32.69	30	25.75	226.3	0.68	0.10	1473.
50	5.85	32.70	50	25.78	223.3	1.13	0.29	1472.
75	5.35	32.76	75	25.82	213.7	1.68	0.63	1471.
100	5.16	32.80	99	25.94	208.5	2.20	1.10	1470.
125	4.86	32.91	124	26.06	197.3	2.72	1.69	1470.
150	4.14	33.53	149	26.63	143.4	3.14	2.28	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	6.11	32.68	77.	5.31	32.76
17.	6.10	32.69	89.	5.21	32.80
28.	6.07	32.69	92.	5.21	32.80
33.	6.07	32.69	94.	5.17	32.80
35.	6.05	32.69	105.	5.15	32.80
37.	6.05	32.69	116.	5.13	32.81
38.	6.01	32.69	122.	5.05	32.84
41.	6.00	32.69	129.	4.60	33.00
42.	5.94	32.69	132.	4.58	33.09
45.	5.93	32.69	133.	4.55	33.10
50.	5.85	32.70	135.	4.45	33.17
52.	5.73	32.71	138.	4.35	33.27
57.	5.63	32.72	140.	4.26	33.33
65.	5.60	32.74	145.	4.21	33.36
70.	5.53	32.74	146.	4.17	33.47
72.	5.42	32.75	150.	4.14	33.53

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 33

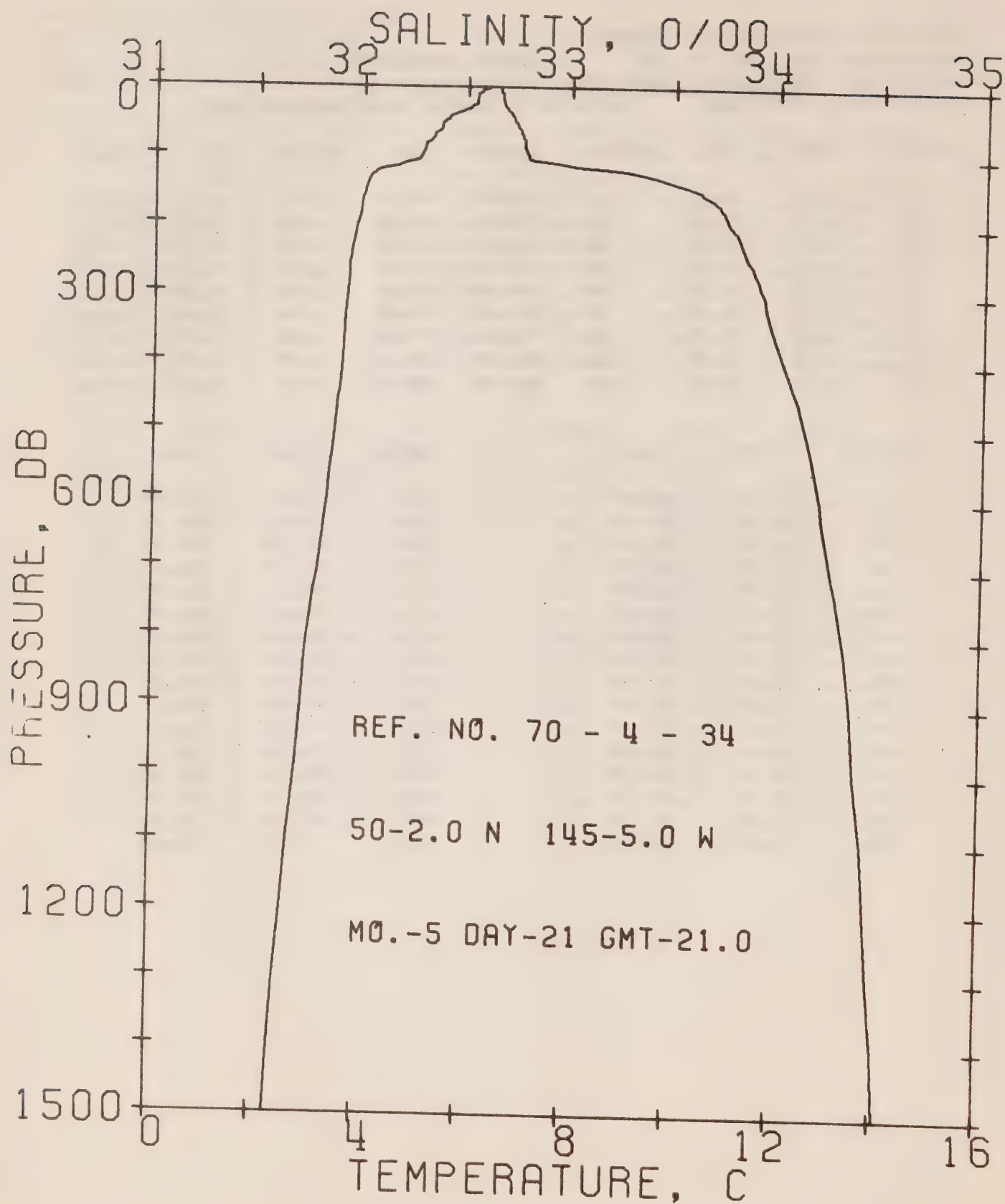
DATE 20/ 5/70

POSITION 50- 0.0N, 145- 0.0W GMT 3.5

RESULTS OF STP CAST 32 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.13	32.67	0	25.72	228.0	0.0	0.0	1473.
10	6.12	32.67	10	25.72	228.3	0.23	0.01	1473.
20	6.12	32.67	20	25.72	228.3	0.46	0.05	1473.
30	6.09	32.67	30	25.73	228.0	0.68	0.10	1473.
50	5.75	32.68	50	25.78	223.6	1.14	0.29	1472.
75	5.30	32.73	75	25.87	214.7	1.69	0.64	1470.
100	5.26	32.76	99	25.90	212.5	2.22	1.11	1471.
125	4.70	32.99	124	26.15	189.1	2.73	1.70	1469.
150	4.18	33.50	149	26.60	146.1	3.14	2.26	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	6.13	32.67	88.	5.27	32.75
27.	6.11	32.67	92.	5.27	32.76
31.	6.08	32.67	98.	5.28	32.76
34.	6.07	32.67	108.	5.18	32.77
41.	6.00	32.67	111.	5.17	32.78
44.	5.91	32.67	114.	4.99	32.80
46.	5.83	32.68	118.	4.94	32.89
49.	5.80	32.68	121.	4.78	32.92
50.	5.75	32.68	122.	4.77	32.95
54.	5.70	32.69	126.	4.68	33.01
59.	5.67	32.70	128.	4.67	33.11
61.	5.61	32.69	132.	4.44	33.31
64.	5.58	32.72	140.	4.25	33.34
72.	5.30	32.73	145.	4.25	33.44
79.	5.30	32.74	147.	4.18	33.46
82.	5.28	32.74	150.	4.18	33.50





PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 34

DATE 21/ 5/70

POSITION 50- 2.0N, 145- 5.0W GMT 21.0

RESULTS OF STP CAST 76 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.35	32.66	0	25.69	231.4	0.0	0.0	1473.
10	6.22	32.67	10	25.71	229.4	0.23	0.01	1473.
20	6.19	32.67	20	25.72	228.8	0.46	0.05	1473.
30	6.07	32.69	30	25.75	226.3	0.69	0.10	1473.
50	5.57	32.73	50	25.84	217.8	1.13	0.29	1471.
75	5.34	32.78	75	25.90	212.0	1.67	0.63	1471.
100	5.13	32.80	99	25.94	208.2	2.19	1.09	1470.
125	4.25	33.34	124	26.46	158.8	2.66	1.63	1468.
150	4.07	33.63	149	26.72	135.2	3.03	2.14	1468.
175	4.00	33.73	174	26.80	127.3	3.35	2.68	1468.
200	3.92	33.78	199	26.85	123.2	3.67	3.28	1468.
225	3.87	33.83	223	26.89	119.0	3.97	3.93	1468.
250	3.80	33.86	248	26.93	116.1	4.26	4.64	1469.
300	3.75	33.94	298	26.99	109.9	4.83	6.22	1469.
400	3.67	34.04	397	27.08	102.4	5.89	10.01	1471.
500	3.54	34.15	496	27.18	93.7	6.87	14.48	1472.
600	3.40	34.22	595	27.25	87.6	7.77	19.55	1473.
800	3.05	34.34	793	27.38	76.6	9.42	31.25	1475.
1000	2.83	34.40	990	27.45	70.8	10.88	44.65	1477.
1200	2.58	34.46	1188	27.52	64.8	12.23	59.74	1480.
1500	2.31	34.52	1483	27.59	58.9	14.08	85.07	1484.

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 36

DATE 22/ 5/70

POSITION 49-49.0N, 144-49.0W GMT 5.5

RESULTS OF STP CAST 30 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.26	32.67	0	25.71	229.6	0.0	0.0	1473.
10	6.26	32.67	10	25.71	229.9	0.23	0.01	1473.
20	6.26	32.67	20	25.71	230.0	0.46	0.05	1473.
30	6.17	32.67	30	25.72	229.0	0.69	0.11	1473.
50	6.12	32.67	50	25.72	228.6	1.15	0.29	1473.
75	5.65	32.72	75	25.82	219.7	1.71	0.65	1472.
100	5.25	32.77	99	25.90	212.0	2.24	1.13	1471.
125	4.62	33.06	124	26.21	183.4	2.74	1.70	1469.
150	4.17	33.51	149	26.61	145.3	3.15	2.26	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	6.26	32.67	88.	5.30	32.75
25.	6.26	32.67	97.	5.27	32.76
28.	6.22	32.67	102.	5.23	32.77
30.	6.17	32.67	106.	5.06	32.80
50.	6.12	32.67	108.	5.05	32.81
52.	6.09	32.68	115.	4.88	32.88
61.	5.77	32.69	116.	4.84	32.89
63.	5.76	32.71	118.	4.81	32.92
64.	5.74	32.71	120.	4.68	32.95
70.	5.72	32.71	125.	4.62	33.06
72.	5.66	32.72	127.	4.62	33.09
75.	5.65	32.72	132.	4.39	33.24
78.	5.59	32.73	138.	4.30	33.34
83.	5.32	32.74	148.	4.17	33.50
85.	5.30	32.74	152.	4.18	33.52

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 37

DATE 22/ 5/70

POSITION 50- 4.0N, 144-58.0W GMT 23.2

RESULTS OF STP CAST 40 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.34	32.67	0	25.70	230.5	0.0	0.0	1473.
10	6.32	32.67	10	25.70	230.6	0.23	0.01	1473.
20	6.23	32.67	20	25.71	229.7	0.46	0.05	1473.
30	6.20	32.67	30	25.71	229.4	0.69	0.11	1473.
50	5.77	32.69	50	25.78	223.1	1.14	0.29	1472.
75	5.31	32.75	75	25.88	213.9	1.69	0.64	1470.
100	5.09	32.79	99	25.94	208.6	2.22	1.11	1470.
125	4.38	33.23	124	26.37	167.9	2.71	1.67	1468.
150	4.15	33.57	149	26.66	140.5	3.08	2.19	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	6.34	32.67	57.	5.64	32.71
7.	6.34	32.67	63.	5.60	32.72
9.	6.32	32.67	72.	5.32	32.74
13.	6.32	32.67	82.	5.28	32.76
16.	6.26	32.67	85.	5.28	32.76
19.	6.25	32.67	88.	5.27	32.77
20.	6.23	32.67	92.	5.18	32.77
25.	6.20	32.67	97.	5.12	32.78
31.	6.20	32.67	105.	5.03	32.80
32.	6.15	32.67	108.	4.98	32.82
35.	6.12	32.68	109.	4.92	32.84
37.	6.12	32.68	112.	4.89	32.88
39.	6.05	32.68	113.	4.77	32.90
42.	5.99	32.69	121.	4.64	33.05
43.	5.92	32.69	123.	4.43	33.18
46.	5.89	32.69	130.	4.27	33.37
47.	5.80	32.69	134.	4.25	33.44
50.	5.77	32.69	138.	4.18	33.48
51.	5.72	32.69	146.	4.17	33.53
54.	5.70	32.70	150.	4.15	33.57

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 38

DATE 23/ 5/70

POSITION 49-56.0N, 145- 5.0W GMT 4.5

RESULTS OF STP CAST 35 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.32	32.70	0	25.72	228.0	0.0	0.0	1473.
10	6.32	32.70	10	25.72	228.4	0.23	0.01	1473.
20	6.28	32.70	20	25.73	227.9	0.46	0.05	1473.
30	6.16	32.71	30	25.75	226.0	0.68	0.10	1473.
50	5.92	32.72	50	25.79	222.5	1.13	0.29	1473.
75	5.46	32.75	75	25.87	215.1	1.68	0.63	1471.
100	5.21	32.80	99	25.93	209.0	2.21	1.11	1471.
125	4.71	33.06	124	26.20	184.3	2.71	1.69	1469.
150	4.07	33.55	149	26.65	141.2	3.11	2.24	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	6.32	32.70	96.	5.28	32.80
16.	6.32	32.70	100.	5.21	32.80
19.	6.30	32.70	102.	5.15	32.80
24.	6.20	32.70	108.	5.12	32.80
29.	6.18	32.71	109.	5.08	32.80
32.	6.13	32.71	112.	5.08	32.81
40.	6.09	32.71	114.	5.04	32.83
46.	6.03	32.72	116.	4.96	32.87
50.	5.92	32.72	120.	4.93	32.91
52.	5.82	32.72	124.	4.73	33.05
56.	5.75	32.73	128.	4.65	33.09
58.	5.67	32.73	129.	4.56	33.13
64.	5.62	32.74	134.	4.47	33.25
69.	5.53	32.74	140.	4.17	33.43
78.	5.43	32.76	142.	4.15	33.45
83.	5.27	32.77	145.	4.09	33.51
87.	5.31	32.78	150.	4.07	33.55
92.	5.30	32.79			



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 39

DATE 23/ 5/70

POSITION 49-58.0N, 145- 1.0W GMT 22.6

RESULTS OF STP CAST 32 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.28	32.69	0	25.72	228.3	0.0	0.0	1473.
10	6.22	32.69	10	25.73	227.9	0.23	0.01	1473.
20	6.23	32.69	20	25.73	228.1	0.46	0.05	1473.
30	6.21	32.69	30	25.73	228.1	0.68	0.10	1473.
50	5.62	32.72	50	25.83	218.8	1.13	0.29	1471.
75	5.21	32.77	75	25.91	211.4	1.67	0.63	1470.
100	5.08	32.79	99	25.95	208.0	2.19	1.10	1470.
125	4.45	33.18	124	26.32	172.6	2.69	1.66	1468.
150	4.08	33.63	149	26.71	135.3	3.07	2.19	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	6.28	32.69	71.	5.23	32.76
1.	6.25	32.69	78.	5.20	32.77
7.	6.22	32.69	91.	5.10	32.78
13.	6.22	32.69	98.	5.10	32.79
15.	6.23	32.69	107.	5.00	32.81
27.	6.23	32.69	109.	4.95	32.82
32.	6.20	32.69	114.	4.91	32.86
34.	6.11	32.70	119.	4.78	32.97
42.	5.98	32.71	120.	4.67	33.00
45.	5.87	32.72	123.	4.59	33.09
48.	5.64	32.72	125.	4.45	33.18
53.	5.58	32.73	129.	4.40	33.26
54.	5.52	32.73	134.	4.20	33.39
57.	5.47	32.74	138.	4.17	33.43
58.	5.41	32.74	145.	4.09	33.59
63.	5.38	32.75	150.	4.08	33.63

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 40

DATE 24/ 5/70

POSITION 50- 7.0N, 145- 3.0W GMT 4.3

RESULTS OF STP CAST 36 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.34	32.67	0	25.70	230.5	0.0	0.0	1473.
10	6.34	32.67	10	25.70	230.8	0.23	0.01	1474.
20	6.34	32.67	20	25.70	230.9	0.46	0.05	1474.
30	6.33	32.67	30	25.70	230.9	0.69	0.11	1474.
50	5.77	32.73	50	25.81	220.2	1.15	0.29	1472.
75	5.34	32.78	75	25.90	212.0	1.69	0.63	1471.
100	5.00	32.81	99	25.97	206.0	2.21	1.10	1470.
125	4.45	33.17	124	26.31	173.1	2.68	1.64	1468.
150	4.12	33.56	149	26.65	140.9	3.07	2.19	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	6.34	32.67	88.	5.17	32.78
22.	6.34	32.67	92.	5.10	32.79
25.	6.33	32.67	97.	5.08	32.80
28.	6.33	32.67	100.	5.00	32.81
33.	6.32	32.67	104.	4.95	32.84
36.	6.25	32.68	106.	4.83	32.91
38.	6.22	32.68	110.	4.69	32.96
40.	6.09	32.68	113.	4.68	33.00
43.	6.04	32.69	116.	4.55	33.05
48.	5.81	32.72	122.	4.52	33.12
53.	5.70	32.74	124.	4.46	33.16
56.	5.70	32.74	127.	4.44	33.20
62.	5.67	32.76	134.	4.35	33.30
65.	5.57	32.76	138.	4.19	33.39
68.	5.53	32.76	142.	4.19	33.45
77.	5.28	32.78	145.	4.14	33.52
79.	5.18	32.78	148.	4.13	33.53
83.	5.20	32.78	150.	4.12	33.56

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 41

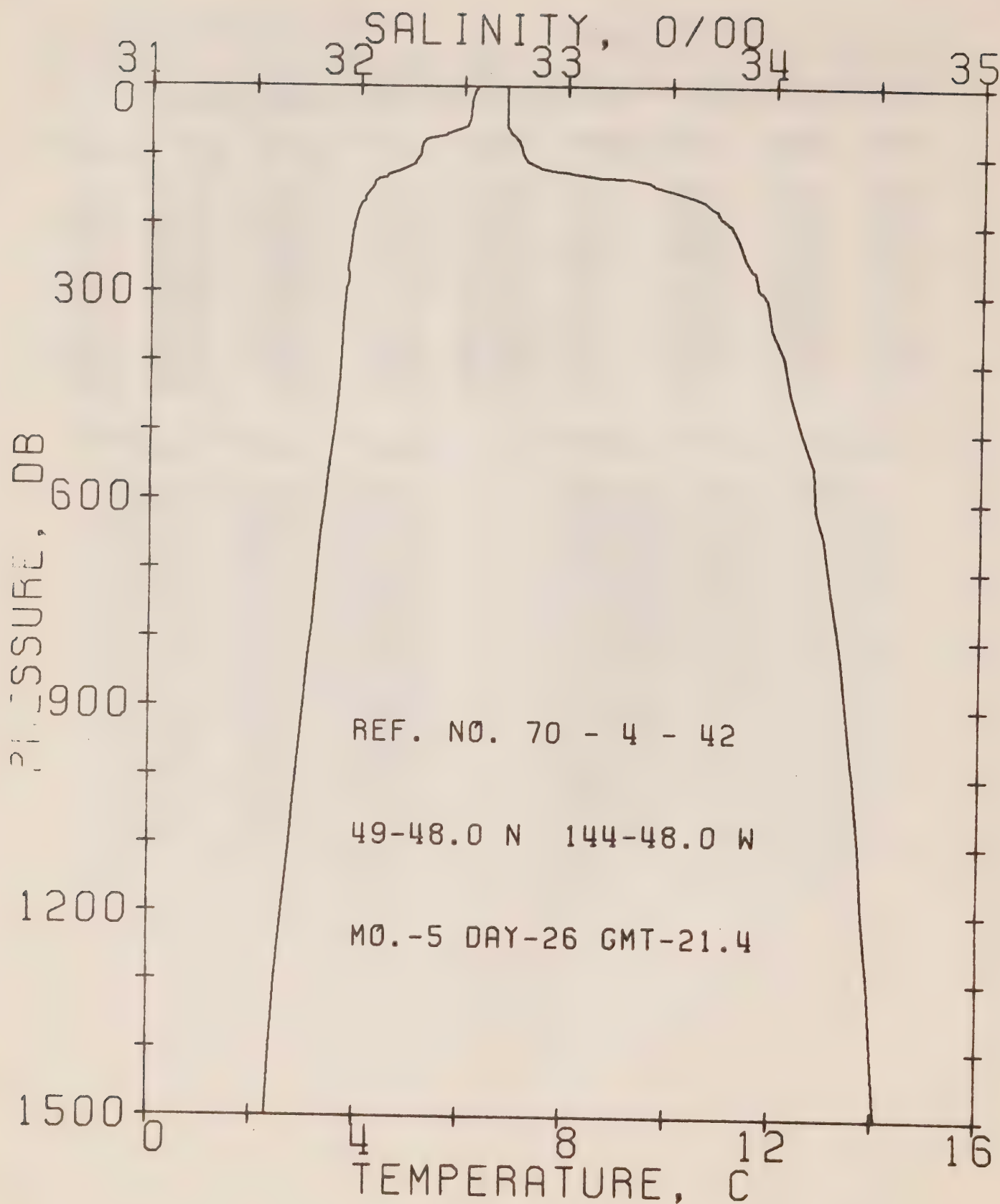
DATE 26/ 5/70

POSITION 49-59.0N. 145- 5.0W GMT 4.3

RESULTS OF STP CAST 32 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.12	32.69	0	25.74	226.4	0.0	0.0	1473.
10	6.12	32.69	10	25.74	226.7	0.23	0.01	1473.
20	6.12	32.69	20	25.74	226.8	0.45	0.05	1473.
30	6.12	32.69	30	25.74	227.0	0.68	0.10	1473.
50	6.12	32.69	50	25.74	227.2	1.13	0.29	1473.
75	5.36	32.78	75	25.90	212.0	1.69	0.64	1471.
100	5.05	32.85	99	25.99	203.5	2.21	1.11	1470.
125	4.47	33.24	124	26.36	168.4	2.67	1.63	1468.
150	4.07	33.56	149	26.66	140.4	3.05	2.16	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	6.12	32.69	97.	5.10	32.82
50.	6.12	32.69	102.	5.02	32.87
56.	6.08	32.70	104.	4.92	32.91
58.	6.03	32.70	106.	4.85	32.93
60.	6.00	32.70	108.	4.69	33.02
62.	5.90	32.72	114.	4.65	33.09
63.	5.83	32.73	118.	4.58	33.17
64.	5.70	32.74	122.	4.48	33.21
65.	5.63	32.75	125.	4.47	33.24
69.	5.50	32.77	128.	4.38	33.27
73.	5.42	32.78	130.	4.31	33.33
77.	5.31	32.78	133.	4.24	33.40
78.	5.28	32.78	137.	4.21	33.44
83.	5.27	32.79	141.	4.13	33.49
85.	5.22	32.79	145.	4.12	33.52
91.	5.19	32.79	150.	4.07	33.56





PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 42

DATE 26/ 5/70

POSITION 49-48.0N, 144-48.0W

GMT 21.4

RESULTS OF STP CAST

70 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.26	32.71	0	25.74	226.6	0.0	0.0	1473.
10	6.20	32.71	10	25.74	226.2	0.23	0.01	1473.
20	6.16	32.71	20	25.75	225.9	0.45	0.05	1473.
30	6.14	32.71	30	25.75	225.7	0.68	0.10	1473.
50	6.12	32.71	50	25.76	225.7	1.13	0.29	1473.
75	5.41	32.75	75	25.87	214.5	1.68	0.64	1471.
100	5.17	32.79	99	25.93	209.4	2.21	1.11	1470.
125	4.69	33.00	124	26.15	188.7	2.72	1.69	1469.
150	4.22	33.48	149	26.58	147.6	3.13	2.27	1468.
175	4.01	33.69	174	26.77	130.1	3.47	2.83	1468.
200	3.90	33.78	199	26.85	122.5	3.79	3.43	1468.
225	3.85	33.83	223	26.90	118.6	4.09	4.09	1468.
250	3.81	33.86	248	26.92	116.2	4.38	4.80	1469.
300	3.74	33.95	298	27.00	109.0	4.95	6.37	1469.
400	3.66	34.06	397	27.09	101.1	6.00	10.12	1471.
500	3.55	34.14	496	27.17	94.4	6.98	14.61	1472.
600	3.38	34.21	595	27.24	88.4	7.88	19.67	1473.
800	3.11	34.32	793	27.36	78.2	9.54	31.45	1475.
1000	2.85	34.40	990	27.44	71.1	11.03	45.11	1478.
1200	2.60	34.45	1188	27.51	65.8	12.40	60.40	1480.
1500	2.30	34.52	1484	27.59	58.8	14.25	85.86	1484.

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 44

DATE 27/ 5/70

POSITION 49-59.0N, 144-53.0W GMT 4.5

RESULTS OF STP CAST 26 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.23	32.68	0	25.72	228.4	0.0	0.0	1473.
10	6.23	32.68	10	25.72	228.7	0.23	0.01	1473.
20	6.20	32.69	20	25.73	227.8	0.46	0.05	1473.
30	6.13	32.69	30	25.74	226.8	0.68	0.10	1473.
50	6.10	32.70	50	25.75	226.2	1.14	0.29	1473.
75	5.20	32.78	75	25.92	210.2	1.68	0.64	1470.
100	5.15	32.79	99	25.93	209.1	2.21	1.10	1470.
125	4.69	33.03	124	26.18	186.0	2.72	1.69	1469.
150	4.15	33.46	149	26.57	148.8	3.13	2.27	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	6.23	32.68	70.	5.27	32.78
17.	6.23	32.68	75.	5.20	32.78
18.	6.20	32.69	84.	5.17	32.79
20.	6.20	32.69	93.	5.16	32.79
21.	6.21	32.69	100.	5.15	32.79
22.	6.14	32.69	105.	5.14	32.79
25.	6.13	32.69	109.	5.12	32.80
40.	6.12	32.70	121.	4.93	32.87
50.	6.10	32.70	123.	4.73	33.00
58.	6.07	32.71	135.	4.52	33.21
60.	6.00	32.72	138.	4.40	33.27
65.	5.45	32.75	140.	4.26	33.34
67.	5.33	32.77	150.	4.15	33.46

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 45

DATE 27/ 5/70

POSITION 50- 0.0N. 145- 0.0W GMT 22.5

RESULTS OF STP CAST 35 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.28	32.68	0	25.71	229.0	0.0	0.0	1473.
10	6.28	32.68	10	25.71	229.4	0.23	0.01	1473.
20	6.20	32.68	20	25.72	228.5	0.46	0.05	1473.
30	6.16	32.68	30	25.73	228.2	0.69	0.10	1473.
50	5.98	32.69	50	25.76	225.5	1.14	0.29	1473.
75	5.26	32.76	75	25.90	212.3	1.68	0.64	1470.
100	4.91	32.89	99	26.04	199.1	2.21	1.10	1469.
125	4.43	33.25	124	26.37	167.4	2.67	1.63	1468.
150	4.08	33.62	149	26.71	136.0	3.05	2.16	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	6.28	32.68	75.	5.26	32.76
7.	6.29	32.68	80.	5.23	32.77
10.	6.28	32.68	95.	5.12	32.79
12.	6.24	32.68	97.	5.00	32.86
17.	6.21	32.68	103.	4.83	32.92
25.	6.18	32.68	109.	4.80	32.95
28.	6.18	32.68	112.	4.75	32.97
32.	6.15	32.68	117.	4.55	33.11
35.	6.14	32.68	122.	4.46	33.19
42.	6.13	32.68	124.	4.45	33.23
45.	6.12	32.69	127.	4.39	33.28
50.	5.98	32.69	131.	4.37	33.29
55.	5.87	32.71	136.	4.24	33.42
57.	5.80	32.72	140.	4.20	33.48
58.	5.70	32.72	144.	4.11	33.57
61.	5.40	32.72	147.	4.08	33.60
63.	5.35	32.74	150.	4.08	33.62
65.	5.30	32.75			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 46

DATE 28/ 5/70

POSITION 50- 0.0N, 145- 0.0W GMT 4.5

RESULTS OF STP CAST 33 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.37	32.69	0	25.71	229.4	0.0	0.0	1474.
10	6.33	32.69	10	25.71	229.2	0.23	0.01	1474.
20	6.22	32.69	20	25.73	228.0	0.46	0.05	1473.
30	6.19	32.69	30	25.73	227.8	0.69	0.10	1473.
50	6.08	32.70	50	25.75	225.9	1.14	0.29	1473.
75	5.65	32.74	75	25.83	218.5	1.70	0.65	1472.
100	5.18	32.78	99	25.92	210.2	2.23	1.12	1470.
125	4.80	32.93	124	26.08	195.0	2.75	1.71	1469.
150	4.25	33.55	149	26.63	143.0	3.16	2.28	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	6.37	32.69	82.	5.39	32.76
5.	6.37	32.69	85.	5.30	32.76
10.	6.33	32.69	88.	5.27	32.76
15.	6.24	32.69	92.	5.22	32.77
21.	6.22	32.69	100.	5.18	32.78
30.	6.19	32.69	110.	5.15	32.79
35.	6.17	32.69	113.	5.13	32.80
43.	6.08	32.69	120.	5.00	32.83
50.	6.08	32.70	125.	4.80	32.93
63.	6.07	32.71	129.	4.68	33.03
67.	6.05	32.71	135.	4.29	33.31
70.	5.90	32.72	137.	4.28	33.34
72.	5.70	32.72	139.	4.30	33.39
73.	5.68	32.73	143.	4.29	33.44
76.	5.64	32.74	144.	4.27	33.50
77.	5.61	32.75	150.	4.25	33.55
79.	5.60	32.75			



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 47

DATE 28/ 5/70

POSITION 50- 0.0N. 145- 0.0W GMT 22.5

RESULTS OF STP CAST 36 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.65	32.66	0	25.65	235.0	0.0	0.0	1475.
10	6.33	32.66	10	25.69	231.5	0.23	0.01	1473.
20	6.22	32.66	20	25.70	230.3	0.46	0.05	1473.
30	6.20	32.67	30	25.71	229.4	0.69	0.11	1473.
50	6.14	32.67	50	25.72	228.5	1.15	0.29	1473.
75	5.25	32.77	75	25.91	211.4	1.69	0.64	1470.
100	4.98	32.91	99	26.05	197.9	2.21	1.10	1470.
125	4.39	33.42	124	26.52	154.0	2.65	1.59	1468.
150	4.11	33.64	149	26.72	134.9	3.00	2.09	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	6.65	32.66	65.	5.40	32.76
2.	6.58	32.66	68.	5.33	32.76
3.	6.57	32.66	80.	5.20	32.78
5.	6.47	32.66	85.	5.17	32.80
7.	6.35	32.66	95.	5.05	32.85
10.	6.33	32.66	98.	4.99	32.89
12.	6.29	32.66	102.	4.97	32.94
17.	6.25	32.66	109.	4.80	33.13
20.	6.22	32.66	112.	4.63	33.17
25.	6.21	32.66	120.	4.43	33.37
30.	6.20	32.67	125.	4.39	33.42
40.	6.19	32.67	130.	4.37	33.44
48.	6.17	32.67	132.	4.32	33.48
52.	6.12	32.68	135.	4.25	33.54
53.	6.05	32.68	142.	4.20	33.61
55.	5.75	32.70	146.	4.08	33.62
57.	5.42	32.72	150.	4.11	33.64
60.	5.39	32.74	152.	4.06	33.66

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 48

DATE 29/ 5/70

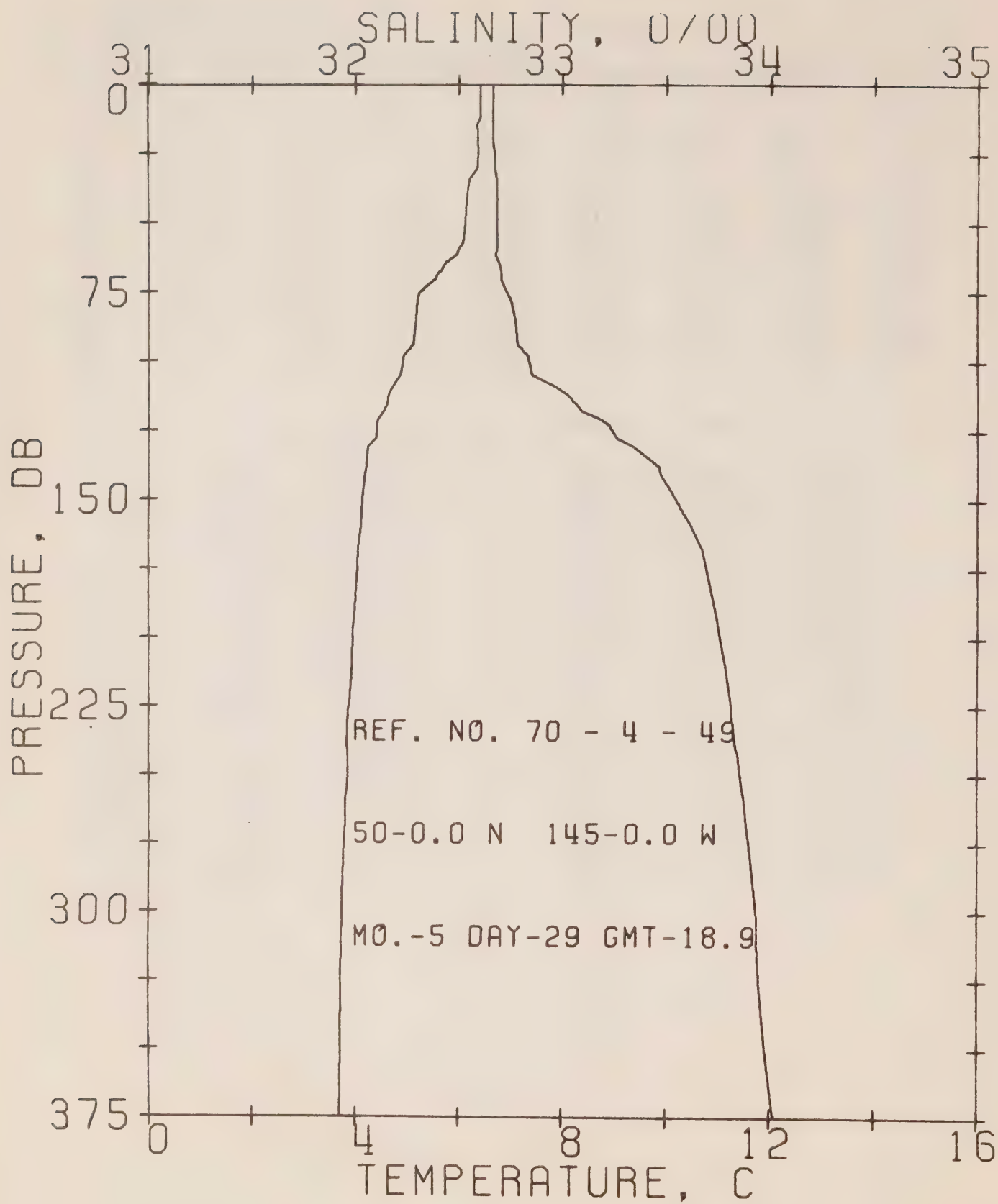
POSITION 49-57.0N, 144-58.0W GMT 4.5

RESULTS OF STP CAST 38 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.92	32.67	0	25.62	237.6	0.0	0.0	1476.
10	6.43	32.67	10	25.68	231.9	0.24	0.01	1474.
20	6.36	32.67	20	25.69	231.2	0.47	0.05	1474.
30	6.26	32.67	30	25.71	230.1	0.70	0.11	1474.
50	6.17	32.68	50	25.73	228.5	1.16	0.29	1474.
75	5.30	32.76	75	25.89	213.0	1.72	0.65	1470.
100	5.13	32.79	99	25.94	208.9	2.24	1.12	1470.
125	4.69	33.11	124	26.24	180.4	2.74	1.68	1469.
150	4.29	33.54	149	26.62	144.1	3.13	2.24	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	6.92	32.67	70.	5.47	32.73
5.	6.92	32.67	72.	5.38	32.75
6.	6.89	32.67	76.	5.28	32.76
7.	6.70	32.67	81.	5.25	32.77
9.	6.44	32.67	90.	5.17	32.78
12.	6.41	32.67	95.	5.16	32.79
17.	6.37	32.67	100.	5.13	32.79
20.	6.36	32.67	104.	5.10	32.80
24.	6.33	32.67	112.	4.97	32.85
26.	6.28	32.67	117.	4.81	32.93
32.	6.25	32.67	118.	4.76	32.93
37.	6.22	32.67	119.	4.72	32.96
40.	6.18	32.68	120.	4.76	33.01
57.	6.16	32.68	122.	4.70	33.07
57.	6.16	32.68	125.	4.69	33.11
61.	6.08	32.67	130.	4.53	33.25
63.	6.05	32.70	140.	4.37	33.46
65.	5.95	32.71	146.	4.34	33.50
67.	5.70	32.72	150.	4.29	33.54







PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 49

DATE 29/ 5/70

POSITION 50- 0.0N, 145- 0.0W GMT 18.9

RESULTS OF STP CAST 59 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.43	32.67	0	25.68	231.6	0.0	0.0	1474.
10	6.43	32.67	10	25.68	231.9	0.23	0.01	1474.
20	6.38	32.67	20	25.69	231.4	0.46	0.05	1474.
30	6.38	32.68	30	25.70	230.8	0.69	0.11	1474.
50	6.13	32.69	50	25.74	227.3	1.15	0.29	1473.
75	5.26	32.74	75	25.88	213.8	1.71	0.65	1470.
100	4.94	32.85	99	26.00	202.6	2.23	1.11	1470.
125	4.42	33.25	124	26.37	167.4	2.70	1.64	1468.
150	4.15	33.55	149	26.65	141.8	3.08	2.18	1468.
175	4.05	33.70	174	26.77	129.9	3.41	2.73	1468.
200	3.96	33.76	199	26.83	124.3	3.73	3.34	1468.
225	3.90	33.82	223	26.88	119.8	4.04	4.00	1469.
250	3.87	33.86	248	26.92	116.6	4.33	4.72	1469.
300	3.75	33.94	298	26.99	110.1	4.90	6.30	1469.

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 50

DATE 29/ 5/70

POSITION 50- 0.0N, 145- 0.0W GMT 22.6

RESULTS OF STP CAST 34 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.55	32.66	0	25.66	233.8	0.0	0.0	1474.
10	6.53	32.67	10	25.67	233.2	0.23	0.01	1474.
20	6.31	32.68	20	25.71	229.8	0.47	0.05	1474.
30	6.14	32.69	30	25.74	227.1	0.69	0.11	1473.
50	6.09	32.70	50	25.75	226.1	1.15	0.29	1473.
75	5.69	32.71	75	25.81	220.9	1.71	0.65	1472.
100	5.13	32.78	99	25.93	209.8	2.24	1.12	1470.
125	4.48	33.24	124	26.36	168.5	2.73	1.68	1469.
150	4.19	33.57	149	26.66	140.9	3.10	2.20	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	6.55	32.66	73.	5.74	32.71
7.	6.55	32.67	76.	5.66	32.71
10.	6.53	32.67	78.	5.55	32.72
12.	6.51	32.67	80.	5.43	32.73
13.	6.48	32.67	86.	5.32	32.74
14.	6.47	32.67	88.	5.28	32.75
17.	6.47	32.67	93.	5.25	32.76
19.	6.29	32.68	96.	5.19	32.77
20.	6.31	32.68	101.	5.12	32.78
22.	6.21	32.68	105.	4.98	32.81
30.	6.14	32.69	112.	4.84	32.89
36.	6.12	32.70	114.	4.81	32.92
47.	6.10	32.70	122.	4.50	33.21
53.	6.09	32.70	126.	4.47	33.25
62.	6.06	32.71	129.	4.33	33.37
67.	5.96	32.71	137.	4.23	33.50
70.	5.91	32.71	150.	4.19	33.57

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 51

DATE 30/ 5/70

POSITION 50- 0.0N, 144-52.0W GMT 4.5

RESULTS OF STP CAST 34 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.53	32.68	0	25.68	232.0	0.0	0.0	1474.
10	6.52	32.68	10	25.68	232.3	0.23	0.01	1474.
20	6.38	32.67	20	25.69	231.4	0.46	0.05	1474.
30	6.21	32.67	30	25.71	229.5	0.69	0.11	1473.
50	6.10	32.67	50	25.73	228.2	1.15	0.29	1473.
75	5.60	32.71	75	25.82	219.9	1.72	0.65	1472.
100	5.15	32.78	99	25.93	209.5	2.25	1.13	1470.
125	4.56	33.08	124	26.23	180.9	2.75	1.70	1469.
150	4.20	33.62	149	26.69	137.2	3.13	2.23	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	6.53	32.68	85.	5.24	32.77
13.	6.52	32.68	92.	5.21	32.78
16.	6.49	32.67	98.	5.18	32.78
19.	6.42	32.67	102.	5.13	32.79
20.	6.38	32.67	105.	5.11	32.79
23.	6.34	32.67	109.	5.02	32.82
25.	6.29	32.67	112.	4.93	32.85
27.	6.23	32.67	116.	4.88	32.88
30.	6.21	32.67	118.	4.77	32.93
35.	6.15	32.67	122.	4.72	32.98
47.	6.11	32.67	126.	4.51	33.12
62.	6.07	32.69	129.	4.42	33.33
68.	6.00	32.69	130.	4.36	33.35
71.	5.93	32.69	134.	4.31	33.41
75.	5.60	32.71	138.	4.32	33.49
77.	5.44	32.72	146.	4.23	33.59
80.	5.32	32.75	150.	4.20	33.62

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 54

DATE 30/ 5/70

POSITION 50- 0.0N, 145- 0.0W GMT 22.5

RESULTS OF STP CAST 40 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.81	32.63	0	25.60	239.3	0.0	0.0	1475.
10	6.79	32.63	10	25.61	239.3	0.24	0.01	1475.
20	6.49	32.65	20	25.66	234.3	0.48	0.05	1474.
30	6.25	32.67	30	25.71	229.9	0.71	0.11	1473.
50	6.18	32.69	50	25.73	227.9	1.17	0.29	1474.
75	5.66	32.72	75	25.82	219.8	1.73	0.65	1472.
100	4.76	32.92	99	26.08	195.2	2.25	1.12	1469.
125	4.17	33.43	124	26.55	150.7	2.68	1.61	1468.
150	4.17	33.67	149	26.74	133.2	3.03	2.10	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	6.81	32.63	80.	5.25	32.75
5.	6.79	32.63	84.	5.12	32.76
10.	6.79	32.63	91.	4.98	32.81
12.	6.77	32.63	96.	4.90	32.86
15.	6.75	32.63	98.	4.79	32.90
17.	6.65	32.64	102.	4.73	32.94
20.	6.49	32.65	104.	4.63	32.99
22.	6.39	32.66	109.	4.55	33.07
25.	6.29	32.67	111.	4.42	33.16
28.	6.26	32.67	116.	4.34	33.24
40.	6.20	32.68	118.	4.26	33.32
50.	6.18	32.69	120.	4.24	33.34
63.	6.14	32.70	124.	4.17	33.42
67.	6.11	32.70	128.	4.17	33.48
69.	5.94	32.70	131.	4.26	33.48
71.	5.80	32.70	132.	4.26	33.55
73.	5.75	32.71	138.	4.24	33.57
75.	5.66	32.72	143.	4.20	33.63
77.	5.50	32.73	147.	4.20	33.65
78.	5.35	32.74	150.	4.17	33.67



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 55

DATE 31/ 5/70

POSITION 50- 0.0N, 145- 4.0W GMT 4.5

RESULTS OF STD CAST 43 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.80	32.65	0	25.62	237.6	0.0	0.0	1475.
10	6.80	32.66	10	25.63	237.4	0.24	0.01	1475.
20	6.53	32.66	20	25.66	234.0	0.47	0.05	1474.
30	6.30	32.67	30	25.70	230.6	0.71	0.11	1474.
50	6.19	32.70	50	25.74	227.3	1.16	0.29	1474.
75	5.33	32.75	75	25.88	214.0	1.72	0.65	1471.
100	4.85	32.87	99	26.03	199.9	2.24	1.11	1469.
125	4.41	33.34	124	26.45	160.2	2.68	1.61	1468.
150	4.14	33.62	149	26.70	136.7	3.05	2.13	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	6.80	32.65	82.	5.15	32.78
13.	6.80	32.66	84.	5.08	32.79
16.	6.74	32.66	89.	5.03	32.80
18.	6.59	32.66	91.	4.97	32.81
21.	6.50	32.66	93.	4.95	32.84
22.	6.45	32.66	96.	4.89	32.86
24.	6.34	32.66	100.	4.85	32.87
26.	6.32	32.66	102.	4.77	32.91
30.	6.30	32.67	103.	4.68	32.93
35.	6.23	32.68	108.	4.59	33.03
39.	6.22	32.69	111.	4.49	33.10
49.	6.20	32.70	119.	4.34	33.29
52.	6.17	32.70	123.	4.36	33.32
53.	6.17	32.70	125.	4.41	33.34
63.	6.07	32.71	128.	4.35	33.38
66.	5.90	32.72	131.	4.35	33.41
67.	5.77	32.72	133.	4.32	33.45
69.	5.72	32.73	137.	4.31	33.52
71.	5.52	32.73	141.	4.24	33.56
73.	5.42	32.74	145.	4.23	33.57
76.	5.28	32.75	150.	4.14	33.62
80.	5.16	32.76			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 56

DATE 31/ 5/70

POSITION 50- 5.0N, 144-59.0W GMT 22.4

RESULTS OF STP CAST 38 POINTS TAKEN FROM ANALOG TRACE

FRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.88	32.65	0	25.61	238.6	0.0	0.0	1475.
10	6.86	32.65	10	25.61	238.8	0.24	0.01	1476.
20	6.60	32.66	20	25.65	234.8	0.48	0.05	1475.
30	6.16	32.71	30	25.75	226.1	0.70	0.11	1473.
50	6.10	32.71	50	25.76	225.5	1.16	0.29	1473.
75	5.57	32.74	75	25.85	217.3	1.71	0.64	1472.
100	5.18	32.79	99	25.93	209.4	2.24	1.12	1470.
125	4.51	33.19	124	26.32	172.4	2.74	1.68	1469.
150	4.19	33.60	149	26.68	138.7	3.11	2.21	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	6.88	32.65	89.	5.26	32.78
6.	6.88	32.65	97.	5.22	32.78
8.	6.87	32.65	99.	5.18	32.79
12.	6.86	32.65	102.	5.17	32.79
13.	6.81	32.65	104.	5.07	32.80
15.	6.80	32.65	107.	5.05	32.82
20.	6.60	32.66	108.	5.02	32.83
22.	6.29	32.68	109.	5.02	32.84
25.	6.19	32.70	114.	4.85	32.89
32.	6.15	32.71	118.	4.82	32.94
34.	6.12	32.71	121.	4.65	33.03
40.	6.11	32.71	126.	4.47	33.23
50.	6.10	32.71	128.	4.38	33.30
57.	6.05	32.71	130.	4.35	33.36
63.	6.04	32.73	132.	4.28	33.44
69.	5.86	32.73	136.	4.27	33.47
75.	5.57	32.74	138.	4.25	33.50
81.	5.34	32.76	142.	4.24	33.53
87.	5.32	32.77	150.	4.19	33.60

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 57

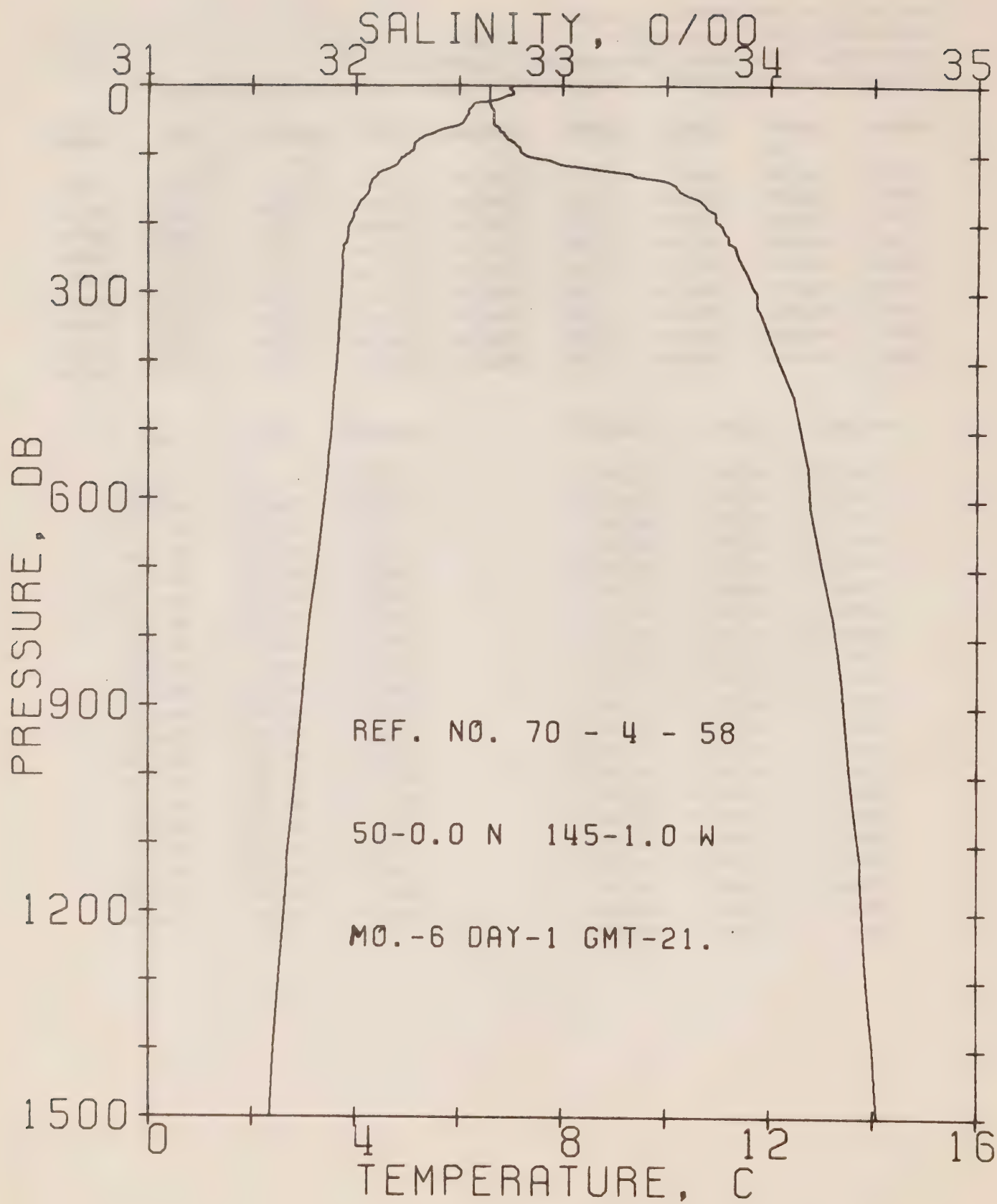
DATE 1/ 6/70

POSITION 50- 1.0N, 144-57.0W GMT 4.5

RESULTS OF STP CAST 41 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.96	32.65	0	25.60	239.6	0.0	0.0	1476.
10	6.95	32.65	10	25.60	239.9	0.24	0.01	1476.
20	6.84	32.66	20	25.62	237.8	0.48	0.05	1476.
30	6.27	32.69	30	25.72	228.4	0.71	0.11	1474.
50	6.06	32.71	50	25.76	225.2	1.17	0.29	1473.
75	5.31	32.75	75	25.88	213.7	1.72	0.65	1471.
100	4.92	32.87	99	26.03	200.3	2.24	1.11	1469.
125	4.49	33.34	124	26.44	161.0	2.69	1.63	1469.
150	4.10	33.68	149	26.75	131.8	3.05	2.12	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	6.96	32.65	67.	5.84	32.73
13.	6.95	32.65	69.	5.61	32.74
14.	6.94	32.65	73.	5.35	32.74
16.	6.94	32.65	77.	5.27	32.76
19.	6.91	32.66	79.	5.27	32.76
20.	6.84	32.66	82.	5.20	32.77
23.	6.76	32.67	85.	5.18	32.77
25.	6.70	32.68	89.	5.09	32.79
29.	6.27	32.69	92.	5.07	32.81
32.	6.26	32.70	106.	4.80	32.92
35.	6.20	32.70	111.	4.61	33.06
38.	6.14	32.70	113.	4.59	33.10
41.	6.11	32.70	117.	4.50	33.24
43.	6.10	32.70	121.	4.51	33.27
45.	6.08	32.70	124.	4.51	33.32
48.	6.08	32.70	131.	4.37	33.47
51.	6.05	32.71	137.	4.27	33.59
55.	6.03	32.71	146.	4.18	33.64
58.	6.03	32.71	148.	4.12	33.67
61.	6.00	32.70	152.	4.09	33.69
64.	5.99	32.73			





PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 58

DATE 1/ 6/70

POSITION 50- 0.0N, 145- 1.0W GMT 21.0

RESULTS OF STP CAST 85 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.03	32.65	0	25.59	240.5	0.0	0.0	1476.
10	7.05	32.65	10	25.55	241.2	0.24	0.01	1476.
20	6.78	32.65	20	25.62	237.8	0.48	0.05	1475.
30	6.27	32.66	30	25.69	231.2	0.71	0.11	1474.
50	6.13	32.67	50	25.72	228.8	1.17	0.30	1473.
75	5.32	32.73	75	25.87	214.9	1.73	0.65	1471.
100	5.00	32.82	99	25.97	205.2	2.25	1.12	1470.
125	4.50	33.27	124	26.38	166.4	2.73	1.66	1469.
150	4.28	33.56	149	26.64	142.4	3.11	2.19	1469.
175	4.06	33.69	174	26.77	130.5	3.45	2.75	1468.
200	3.91	33.76	199	26.83	124.3	3.76	3.35	1468.
225	3.84	33.80	223	26.87	120.7	4.07	4.01	1468.
250	3.75	33.85	248	26.93	115.9	4.36	4.73	1468.
300	3.73	33.94	298	27.00	109.7	4.93	6.31	1469.
400	3.66	34.05	397	27.09	101.6	5.99	10.09	1471.
500	3.54	34.15	496	27.18	93.3	6.96	14.51	1472.
600	3.41	34.20	595	27.23	89.4	7.87	19.61	1473.
800	3.10	34.32	793	27.36	78.2	9.54	31.52	1475.
1000	2.85	34.39	990	27.44	71.8	11.04	45.19	1478.
1200	2.62	34.45	1188	27.50	66.0	12.41	60.51	1480.
1500	2.33	34.52	1483	27.59	59.1	14.28	86.24	1484.

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 60

DATE 2/ 6/70

POSITION 49-59.0N, 144-59.0W GMT 5.1

RESULTS OF STP CAST 40 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.38	32.63	0	25.53	246.6	0.0	0.0	1477.
10	7.07	32.64	10	25.58	242.1	0.25	0.01	1476.
20	6.87	32.64	20	25.60	239.8	0.49	0.05	1476.
30	6.43	32.66	30	25.67	233.1	0.72	0.11	1474.
50	6.17	32.68	50	25.73	228.2	1.18	0.30	1474.
75	5.73	32.73	75	25.82	219.8	1.75	0.66	1472.
100	5.00	32.83	99	25.98	204.4	2.28	1.13	1470.
125	4.29	33.32	124	26.45	160.1	2.74	1.65	1468.
150	4.21	33.63	149	26.70	136.6	3.10	2.16	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.38	32.63	86.	5.27	32.77
2.	7.38	32.63	90.	5.18	32.79
7.	7.28	32.64	93.	5.15	32.79
8.	7.22	32.64	98.	5.06	32.81
11.	6.99	32.64	103.	4.91	32.86
23.	6.83	32.64	106.	4.78	32.90
25.	6.75	32.64	108.	4.72	32.94
28.	6.52	32.65	111.	4.60	33.00
31.	6.38	32.66	115.	4.54	33.08
32.	6.37	32.67	117.	4.46	33.14
33.	6.29	32.67	118.	4.43	33.16
37.	6.23	32.68	120.	4.36	33.22
42.	6.21	32.68	122.	4.35	33.24
44.	6.18	32.68	128.	4.23	33.41
59.	6.16	32.69	132.	4.27	33.48
66.	6.14	32.70	134.	4.26	33.51
69.	6.14	32.70	136.	4.27	33.53
72.	6.00	32.71	141.	4.27	33.57
79.	5.37	32.76	144.	4.23	33.60
82.	5.35	32.77	150.	4.21	33.63

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 61

DATE 2/ 6/70

POSITION 50- 0.0N, 145- 0.0W GMT 22.4

RESULTS OF STP CAST 41 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.37	32.63	0	25.53	246.4	0.0	0.0	1477.
10	7.21	32.64	10	25.56	243.6	0.25	0.01	1477.
20	6.84	32.66	20	25.63	237.7	0.49	0.05	1476.
30	6.28	32.68	30	25.71	229.2	0.72	0.11	1474.
50	6.10	32.69	50	25.74	226.7	1.17	0.29	1473.
75	5.35	32.77	75	25.89	212.8	1.72	0.64	1471.
100	5.05	32.83	99	25.98	205.0	2.25	1.11	1470.
125	4.39	33.30	124	26.42	163.0	2.72	1.64	1468.
150	4.22	33.60	149	26.68	139.0	3.09	2.17	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.37	32.63	72.	5.36	32.76
6.	7.38	32.64	76.	5.35	32.77
8.	7.33	32.64	77.	5.34	32.77
9.	7.24	32.64	80.	5.34	32.78
11.	7.18	32.65	85.	5.26	32.78
13.	6.95	32.65	88.	5.26	32.78
23.	6.80	32.67	92.	5.22	32.79
25.	6.50	32.67	97.	5.10	32.81
27.	6.38	32.68	107.	4.94	32.88
33.	6.19	32.69	110.	4.79	32.94
41.	6.14	32.69	111.	4.79	32.96
44.	6.14	32.69	116.	4.53	33.10
49.	6.11	32.69	122.	4.39	33.22
53.	6.06	32.70	125.	4.39	33.30
55.	6.04	32.70	127.	4.33	33.32
57.	5.94	32.71	130.	4.33	33.36
59.	5.92	32.71	132.	4.26	33.42
61.	5.80	32.71	135.	4.18	33.44
63.	5.74	32.74	141.	4.24	33.52
66.	5.50	32.74	150.	4.22	33.60
68.	5.43	32.74			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 62

DATE 3/ 6/70

POSITION 50- 0.0N, 144-58.0W GMT 4.4

RESULTS OF STP CAST 31 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.53	32.64	0	25.51	247.8	0.0	0.0	1478.
10	7.54	32.65	10	25.52	247.7	0.25	0.01	1478.
20	7.03	32.65	20	25.59	241.1	0.49	0.05	1476.
30	6.76	32.66	30	25.63	237.0	0.73	0.11	1476.
50	6.18	32.67	50	25.72	229.4	1.19	0.30	1474.
75	5.63	32.74	75	25.84	218.0	1.76	0.66	1472.
100	5.03	32.81	99	25.96	206.3	2.29	1.13	1470.
125	4.39	33.22	124	26.35	169.3	2.76	1.67	1468.
150	4.23	33.65	149	26.71	135.3	3.14	2.19	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.53	32.64	88.	5.24	32.76
12.	7.54	32.65	98.	5.06	32.80
21.	6.97	32.65	102.	5.01	32.82
23.	6.92	32.65	104.	4.88	32.87
29.	6.83	32.66	108.	4.83	32.90
37.	6.31	32.67	112.	4.72	32.97
42.	6.27	32.67	115.	4.68	32.99
46.	6.20	32.67	121.	4.42	33.16
53.	6.16	32.67	126.	4.38	33.23
62.	6.15	32.69	128.	4.31	33.28
64.	6.11	32.70	135.	4.23	33.43
72.	5.94	32.73	137.	4.27	33.52
75.	5.63	32.74	139.	4.27	33.55
80.	5.37	32.74	150.	4.23	33.65
81.	5.32	32.74	153.	4.19	33.67
85.	5.25	32.75			



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 63

DATE 3/ 6/70

POSITION 50- 0.0N. 145- 0.0W GMT 22.5

RESULTS OF STP CAST 41 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.50	32.65	0	25.53	246.7	0.0	0.0	1478.
10	7.47	32.65	10	25.53	246.6	0.25	0.01	1478.
20	6.77	32.66	20	25.63	237.0	0.49	0.05	1475.
30	6.24	32.66	30	25.70	230.3	0.72	0.11	1473.
50	6.15	32.68	50	25.73	228.5	1.18	0.30	1473.
75	5.43	32.78	75	25.90	212.5	1.73	0.65	1471.
100	5.16	32.80	99	25.94	208.2	2.26	1.12	1470.
125	4.73	33.01	124	26.16	188.0	2.76	1.69	1469.
150	4.20	33.50	149	26.60	146.4	3.17	2.27	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.50	32.65	81.	5.35	32.79
6.	7.49	32.65	85.	5.33	32.79
8.	7.47	32.65	88.	5.27	32.79
12.	7.47	32.65	93.	5.23	32.80
14.	7.43	32.65	95.	5.18	32.80
15.	7.25	32.65	99.	5.17	32.80
19.	6.82	32.66	106.	5.07	32.82
22.	6.67	32.66	107.	5.00	32.83
23.	6.37	32.66	109.	4.99	32.84
28.	6.27	32.66	113.	4.87	32.88
32.	6.22	32.67	118.	4.84	32.91
38.	6.19	32.67	120.	4.79	32.93
45.	6.17	32.67	122.	4.80	32.98
52.	6.14	32.68	130.	4.62	33.07
53.	6.10	32.68	134.	4.46	33.19
61.	6.00	32.69	136.	4.46	33.23
64.	5.76	32.75	138.	4.35	33.31
67.	5.67	32.77	143.	4.28	33.39
70.	5.49	32.78	147.	4.22	33.45
74.	5.45	32.78	152.	4.19	33.53
79.	5.33	32.79			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 64

DATE 4/ 6/70

POSITION 50- 0.0N, 145- 0.0W GMT 4.5

RESULTS OF STP CAST 28 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.55	32.64	0	25.51	248.1	0.0	0.0	1478.
10	7.54	32.65	10	25.52	247.7	0.25	0.01	1478.
20	6.93	32.65	20	25.60	239.8	0.49	0.05	1476.
30	6.45	32.69	30	25.70	230.5	0.73	0.11	1474.
50	6.11	32.71	50	25.76	225.6	1.18	0.29	1473.
75	5.75	32.73	75	25.82	219.7	1.74	0.65	1472.
100	5.22	32.79	99	25.93	209.8	2.27	1.12	1471.
125	4.68	33.06	124	26.20	184.1	2.78	1.70	1469.
150	4.18	33.58	149	26.67	139.9	3.18	2.26	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.55	32.64	87.	5.32	32.78
12.	7.54	32.65	90.	5.32	32.80
15.	7.38	32.65	92.	5.30	32.80
18.	6.95	32.65	95.	5.24	32.79
22.	6.91	32.65	102.	5.21	32.79
31.	6.39	32.70	112.	4.96	32.87
36.	6.22	32.71	117.	4.85	32.91
44.	6.15	32.71	122.	4.82	32.92
47.	6.15	32.71	125.	4.68	33.06
50.	6.11	32.71	127.	4.66	33.08
68.	6.03	32.73	134.	4.48	33.24
73.	5.96	32.73	137.	4.47	33.30
74.	5.80	32.73	144.	4.23	33.50
78.	5.59	32.75	152.	4.17	33.61

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 65

DATE 4/ 6/70

POSITION 49-58.0N. 144-55.0W GMT 21.2

RESULTS OF STP CAST 44 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.36	32.67	0	25.56	243.4	0.0	0.0	1477.
10	7.33	32.67	10	25.56	243.3	0.24	0.01	1477.
20	7.16	32.67	20	25.59	241.2	0.49	0.05	1477.
30	6.35	32.69	30	25.71	229.7	0.72	0.11	1474.
50	6.10	32.70	50	25.75	226.2	1.18	0.30	1473.
75	5.50	32.74	75	25.85	216.5	1.74	0.65	1471.
100	5.14	32.79	99	25.93	209.1	2.27	1.12	1470.
125	4.60	33.19	124	26.31	173.5	2.76	1.68	1469.
150	4.30	33.62	149	26.68	138.3	3.13	2.21	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.36	32.67	71.	5.73	32.73
3.	7.36	32.67	75.	5.50	32.74
8.	7.34	32.67	78.	5.35	32.75
12.	7.33	32.67	82.	5.30	32.76
15.	7.32	32.67	89.	5.25	32.77
17.	7.31	32.67	91.	5.22	32.78
21.	7.11	32.67	95.	5.18	32.78
22.	7.15	32.67	98.	5.17	32.78
23.	7.14	32.68	105.	5.07	32.81
24.	7.06	32.68	110.	4.98	32.86
25.	6.97	32.68	115.	4.86	32.97
27.	6.55	32.68	118.	4.74	33.07
30.	6.35	32.69	122.	4.68	33.10
34.	6.28	32.69	125.	4.60	33.19
38.	6.27	32.69	127.	4.55	33.25
39.	6.20	32.69	129.	4.52	33.28
43.	6.13	32.69	132.	4.45	33.41
50.	6.10	32.70	133.	4.43	33.42
55.	6.10	32.70	135.	4.40	33.47
63.	6.07	32.71	140.	4.36	33.53
65.	6.05	32.72	147.	4.35	33.57
70.	5.85	32.73	150.	4.30	33.62

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 66

DATE 5/ 6/70

POSITION 50- 2.0N, 144-57.0W GMT 0.2

RESULTS OF STP CAST 37 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.25	32.64	0	25.55	244.2	0.0	0.0	1477.
10	7.25	32.64	10	25.55	244.5	0.24	0.01	1477.
20	7.23	32.64	20	25.56	244.3	0.49	0.05	1477.
30	6.71	32.65	30	25.63	237.0	0.73	0.11	1475.
50	6.21	32.67	50	25.71	229.7	1.19	0.30	1474.
75	5.67	32.76	75	25.85	216.9	1.76	0.66	1472.
100	5.19	32.80	99	25.94	208.8	2.29	1.13	1470.
125	4.52	33.10	124	26.25	179.4	2.78	1.70	1469.
150	4.22	33.58	149	26.66	140.4	3.17	2.24	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.25	32.64	88.	5.37	32.79
13.	7.25	32.64	92.	5.30	32.79
22.	7.22	32.64	97.	5.25	32.80
25.	7.15	32.64	98.	5.21	32.80
28.	7.00	32.65	101.	5.18	32.80
29.	6.78	32.65	103.	5.11	32.81
35.	6.35	32.66	107.	5.09	32.83
37.	6.31	32.66	111.	4.99	32.85
41.	6.28	32.67	113.	4.98	32.87
42.	6.25	32.67	117.	4.83	32.93
50.	6.21	32.67	120.	4.66	33.02
58.	6.18	32.67	122.	4.64	33.04
65.	6.10	32.70	126.	4.48	33.12
70.	5.97	32.73	132.	4.32	33.34
74.	5.70	32.76	140.	4.20	33.44
75.	5.67	32.76	144.	4.18	33.55
77.	5.65	32.77	146.	4.21	33.57
80.	5.45	32.77	150.	4.22	33.58
83.	5.37	32.78			



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 67

DATE 5/ 6/70

POSITION 50- 2.0N. 144-57.0W GMT 0.3

RESULTS OF STP CAST 32 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.27	32.64	0	25.55	244.4	0.0	0.0	1477.
10	7.26	32.64	10	25.55	244.6	0.24	0.01	1477.
20	7.23	32.64	20	25.56	244.2	0.49	0.05	1477.
30	7.19	32.65	30	25.57	243.2	0.73	0.11	1477.
50	6.21	32.66	50	25.70	230.5	1.20	0.30	1474.
75	5.69	32.73	75	25.83	219.2	1.77	0.66	1472.
100	5.13	32.79	99	25.94	208.9	2.30	1.13	1470.
125	4.41	33.21	124	26.34	170.2	2.78	1.69	1468.
150	4.22	33.55	149	26.64	142.4	3.17	2.23	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.27	32.64	85.	5.37	32.77
18.	7.25	32.64	92.	5.20	32.78
19.	7.23	32.64	100.	5.13	32.79
26.	7.22	32.65	103.	5.07	32.80
31.	7.18	32.65	112.	4.87	32.90
33.	6.61	32.66	113.	4.87	32.90
35.	6.33	32.66	115.	4.75	32.98
39.	6.28	32.66	120.	4.54	33.09
45.	6.26	32.66	129.	4.31	33.30
51.	6.20	32.66	137.	4.29	33.37
53.	6.20	32.66	142.	4.23	33.48
63.	6.13	32.68	143.	4.23	33.48
67.	6.05	32.69	146.	4.19	33.49
76.	5.65	32.74	151.	4.23	33.57
78.	5.42	32.76	153.	4.23	33.61
82.	5.37	32.77	154.	4.21	33.63

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 68

DATE 5/ 6/70

POSITION 50- 2.0N, 144-57.0W GMT 0.5

RESULTS OF STP CAST 31 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.31	32.64	0	25.54	244.9	0.0	0.0	1477.
10	7.30	32.64	10	25.55	245.0	0.25	0.01	1477.
20	7.30	32.65	20	25.55	244.7	0.49	0.05	1477.
30	6.35	32.66	30	25.69	232.0	0.73	0.11	1474.
50	6.18	32.66	50	25.71	230.1	1.19	0.30	1474.
75	5.58	32.76	75	25.86	215.9	1.76	0.66	1472.
100	5.11	32.81	99	25.95	207.3	2.29	1.13	1470.
125	4.42	33.24	124	26.37	168.1	2.76	1.67	1468.
150	4.21	33.54	149	26.63	143.2	3.15	2.21	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.31	32.64	88.	5.25	32.77
7.	7.30	32.64	95.	5.19	32.78
23.	7.30	32.65	102.	5.08	32.82
25.	7.25	32.65	104.	5.08	32.83
30.	6.35	32.66	111.	4.86	32.93
43.	6.22	32.66	113.	4.86	32.98
52.	6.17	32.66	120.	4.50	33.12
60.	6.13	32.66	126.	4.40	33.26
62.	6.10	32.67	128.	4.31	33.30
64.	5.96	32.70	135.	4.29	33.38
68.	5.87	32.72	140.	4.24	33.46
70.	5.78	32.74	145.	4.18	33.49
72.	5.76	32.75	147.	4.18	33.50
75.	5.58	32.76	152.	4.23	33.57
80.	5.49	32.77	153.	4.22	33.59
83.	5.37	32.77			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 69

DATE 5/ 6/70

POSITION 50- 2.0N, 144-57.0W GMT 0.8

RESULTS OF STP CAST 39 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.33	32.64	0	25.54	245.2	0.0	0.0	1477.
10	7.32	32.64	10	25.54	245.4	0.25	0.01	1477.
20	7.30	32.64	20	25.55	245.3	0.49	0.05	1477.
30	6.47	32.65	30	25.66	234.1	0.73	0.11	1474.
50	6.18	32.66	50	25.71	230.2	1.20	0.30	1474.
75	5.58	32.76	75	25.86	215.9	1.76	0.66	1472.
100	5.14	32.79	99	25.94	208.7	2.29	1.13	1470.
125	4.38	33.25	124	26.38	166.6	2.76	1.67	1468.
150	4.22	33.61	149	26.68	138.2	3.14	2.20	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.33	32.64	93.	5.23	32.78
18.	7.31	32.64	95.	5.22	32.78
25.	7.27	32.64	96.	5.18	32.78
27.	7.23	32.64	102.	5.12	32.80
30.	6.47	32.65	103.	5.07	32.82
31.	6.38	32.66	107.	5.06	32.87
41.	6.25	32.66	110.	4.86	32.93
44.	6.20	32.66	113.	4.78	33.01
52.	6.18	32.66	114.	4.67	33.04
60.	6.13	32.66	116.	4.64	33.06
63.	6.05	32.69	121.	4.43	33.19
65.	5.86	32.70	125.	4.38	33.25
67.	5.83	32.73	135.	4.27	33.42
70.	5.75	32.75	137.	4.27	33.46
72.	5.70	32.76	141.	4.18	33.48
77.	5.50	32.76	143.	4.18	33.50
79.	5.48	32.77	147.	4.22	33.57
82.	5.37	32.77	150.	4.22	33.61
83.	5.35	32.77	152.	4.21	33.64
87.	5.27	32.78			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 70

DATE 5/ 6/70

POSITION 50- 2.0N, 144-57.0W

GMT 0.9

RESULTS OF STP CAST

37 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.32	32.64	0	25.54	245.1	0.0	0.0	1477.
10	7.32	32.64	10	25.54	245.4	0.25	0.01	1477.
20	7.28	32.64	20	25.55	245.0	0.49	0.05	1477.
30	6.63	32.65	30	25.64	236.1	0.73	0.11	1475.
50	6.17	32.67	50	25.71	229.6	1.20	0.30	1473.
75	5.55	32.77	75	25.87	214.8	1.76	0.66	1472.
100	5.09	32.80	99	25.95	207.7	2.29	1.13	1470.
125	4.39	33.23	124	26.36	168.4	2.76	1.67	1468.
150	4.19	33.65	149	26.72	134.9	3.14	2.20	1463.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.32	32.64	90.	5.30	32.77
18.	7.32	32.64	92.	5.22	32.78
23.	7.22	32.64	96.	5.17	32.78
24.	7.25	32.65	98.	5.15	32.79
26.	7.24	32.65	100.	5.09	32.80
28.	7.13	32.65	103.	5.06	32.82
31.	6.38	32.65	105.	5.07	32.82
39.	6.21	32.66	109.	4.91	32.90
56.	6.15	32.67	112.	4.86	32.94
57.	6.12	32.67	116.	4.64	33.06
61.	6.10	32.66	118.	4.63	33.08
66.	5.79	32.73	126.	4.36	33.25
68.	5.73	32.74	137.	4.29	33.44
70.	5.65	32.75	141.	4.19	33.49
75.	5.55	32.77	144.	4.22	33.55
78.	5.51	32.76	148.	4.14	33.58
82.	5.41	32.77	150.	4.19	33.65
83.	5.40	32.77	152.	4.19	33.65
85.	5.33	32.78			



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 71

DATE 5/ 6/70

POSITION 50- 3.0N, 145- 1.0W GMT 3.0

RESULTS OF STD CAST 35 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.37	32.64	0	25.54	245.7	0.0	0.0	1477.
10	7.34	32.64	10	25.54	245.7	0.25	0.01	1477.
20	7.33	32.65	20	25.55	245.1	0.49	0.05	1478.
30	6.55	32.65	30	25.65	235.1	0.73	0.11	1475.
50	6.20	32.67	50	25.71	229.6	1.19	0.30	1474.
75	5.75	32.75	75	25.83	218.4	1.76	0.66	1472.
100	5.16	32.79	99	25.93	209.5	2.29	1.13	1470.
125	4.76	33.07	124	26.20	184.2	2.79	1.70	1469.
150	4.10	33.55	149	26.65	141.4	3.18	2.25	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.37	32.64	79.	5.50	32.76
7.	7.37	32.64	84.	5.34	32.76
11.	7.33	32.64	88.	5.24	32.78
17.	7.34	32.64	105.	5.13	32.79
21.	7.33	32.65	113.	4.93	32.88
23.	7.29	32.65	115.	4.91	32.91
25.	7.15	32.65	117.	4.91	32.94
28.	6.70	32.65	118.	4.88	32.96
32.	6.40	32.65	120.	4.82	33.01
33.	6.33	32.65	125.	4.76	33.07
34.	6.26	32.66	127.	4.62	33.11
36.	6.24	32.66	130.	4.53	33.18
45.	6.22	32.67	131.	4.55	33.20
55.	6.19	32.67	133.	4.39	33.30
64.	6.17	32.69	137.	4.22	33.37
67.	6.13	32.70	143.	4.11	33.51
70.	5.94	32.72	150.	4.10	33.55
76.	5.71	32.76			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 72

DATE 5/ 6/70

POSITION 50- 8.0N, 144 5.0W GMT 5.8

RESULTS OF STP CAST 33 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.24	32.64	0	25.55	244.0	0.0	0.0	1477.
10	7.24	32.64	10	25.55	244.3	0.24	0.01	1477.
20	7.22	32.64	20	25.56	244.0	0.49	0.05	1477.
30	7.06	32.65	30	25.59	241.3	0.73	0.11	1477.
50	6.15	32.68	50	25.73	228.3	1.19	0.30	1473.
75	5.65	32.73	75	25.83	219.0	1.76	0.66	1472.
100	5.09	32.79	99	25.94	208.3	2.29	1.13	1470.
125	4.42	33.34	124	26.45	160.3	2.76	1.67	1468.
150	4.21	33.59	149	26.67	139.6	3.14	2.19	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.24	32.64	80.	5.33	32.76
19.	7.24	32.64	87.	5.30	32.76
22.	7.18	32.65	96.	5.14	32.78
23.	7.16	32.65	103.	5.05	32.80
25.	7.15	32.65	105.	5.03	32.81
26.	7.12	32.65	112.	4.76	32.91
29.	7.11	32.65	114.	4.71	33.02
32.	6.97	32.66	116.	4.68	33.04
34.	6.75	32.66	120.	4.57	33.20
36.	6.35	32.66	122.	4.47	33.26
38.	6.23	32.67	125.	4.42	33.34
47.	6.16	32.68	132.	4.37	33.44
59.	6.11	32.68	138.	4.34	33.49
65.	6.08	32.70	142.	4.28	33.53
68.	6.05	32.70	145.	4.22	33.57
75.	5.65	32.73	150.	4.21	33.59
78.	5.39	32.75			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 73

DATE 5/ 6/70

POSITION 50- 3.0N. 145- 1.0W GMT 9.0

RESULTS OF STP CAST 38 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.26	32.64	0	25.55	244.3	0.0	0.0	1477.
10	7.26	32.64	10	25.55	244.6	0.24	0.01	1477.
20	7.23	32.64	20	25.56	244.3	0.49	0.05	1477.
30	6.34	32.65	30	25.68	232.6	0.73	0.11	1474.
50	6.18	32.67	50	25.72	229.4	1.19	0.30	1474.
75	5.32	32.78	75	25.91	211.6	1.74	0.65	1471.
100	5.15	32.82	99	25.95	207.2	2.27	1.12	1470.
125	4.44	33.24	124	26.36	168.3	2.75	1.67	1468.
150	4.18	33.63	149	26.70	136.3	3.12	2.19	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.26	32.64	73.	5.34	32.78
18.	7.26	32.64	77.	5.31	32.78
19.	7.23	32.64	80.	5.27	32.78
25.	7.24	32.65	85.	5.23	32.79
27.	7.17	32.65	93.	5.19	32.79
28.	6.50	32.65	96.	5.16	32.80
30.	6.34	32.65	99.	5.16	32.81
32.	6.30	32.66	108.	5.03	32.86
34.	6.29	32.66	112.	4.93	32.93
40.	6.22	32.67	115.	4.89	32.96
45.	6.20	32.67	120.	4.60	33.10
48.	6.17	32.67	123.	4.58	33.19
51.	6.19	32.67	126.	4.37	33.26
53.	6.19	32.67	128.	4.28	33.30
58.	6.09	32.69	133.	4.19	33.42
62.	5.99	32.70	138.	4.17	33.48
68.	5.51	32.78	140.	4.12	33.51
70.	5.45	32.78	147.	4.20	33.62
71.	5.36	32.78	150.	4.18	33.63

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 74

DATE 6/ 6/70

POSITION 50-11.0N, 145- 4.0W GMT 0.2

RESULTS OF STP CAST 35 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.18	32.64	0	25.56	243.3	0.0	0.0	1477.
10	7.17	32.64	10	25.56	243.4	0.24	0.01	1477.
20	7.11	32.64	20	25.57	242.6	0.49	0.05	1477.
30	7.07	32.65	30	25.58	241.7	0.73	0.11	1477.
50	6.25	32.69	50	25.72	228.7	1.21	0.31	1474.
75	6.02	32.71	75	25.77	224.7	1.77	0.67	1473.
100	5.03	32.81	99	25.57	205.9	2.31	1.14	1470.
125	4.63	33.12	124	26.25	179.1	2.80	1.70	1469.
150	4.20	33.60	149	26.68	138.8	3.19	2.24	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.18	32.64	89.	5.28	32.75
5.	7.17	32.64	99.	5.06	32.81
15.	7.17	32.64	101.	5.00	32.82
17.	7.13	32.64	103.	4.97	32.84
25.	7.09	32.65	106.	4.94	32.86
35.	7.06	32.65	111.	4.88	32.89
40.	7.06	32.65	114.	4.77	32.93
42.	7.03	32.65	117.	4.73	32.94
45.	6.73	32.65	120.	4.78	33.00
47.	6.36	32.66	128.	4.54	33.19
50.	6.25	32.69	130.	4.40	33.23
52.	6.23	32.69	134.	4.30	33.36
67.	6.15	32.71	136.	4.34	33.42
72.	6.11	32.71	138.	4.33	33.47
75.	6.02	32.71	142.	4.21	33.53
77.	5.93	32.71	146.	4.21	33.57
81.	5.55	32.72	150.	4.20	33.60
84.	5.47	32.72			



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 73- 4- 75

DATE 6/ 6/70

POSITION 50-11.0N, 145- 4.0W GMT 0.3

RESULTS OF STP CAST 36 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.20	32.64	0	25.56	243.4	0.0	0.0	1477.
10	7.16	32.64	10	25.56	243.3	0.24	0.01	1477.
20	7.14	32.64	20	25.57	243.2	0.49	0.05	1477.
30	7.08	32.64	30	25.58	242.3	0.73	0.11	1477.
50	6.30	32.69	50	25.72	229.3	1.21	0.31	1474.
75	6.03	32.71	75	25.77	224.9	1.78	0.67	1473.
100	4.99	32.82	99	25.98	205.0	2.31	1.15	1470.
125	4.51	33.19	124	26.32	172.5	2.80	1.70	1469.
150	4.21	33.59	149	26.67	139.6	3.18	2.23	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.20	32.64	81.	5.61	32.73
7.	7.16	32.64	87.	5.29	32.74
17.	7.16	32.64	92.	5.21	32.76
20.	7.14	32.64	98.	5.03	32.81
22.	7.10	32.64	106.	4.88	32.86
40.	7.06	32.65	108.	4.87	32.86
43.	7.03	32.65	113.	4.75	32.94
46.	6.95	32.66	116.	4.77	32.96
50.	6.30	32.69	119.	4.73	33.03
51.	6.24	32.69	122.	4.62	33.14
56.	6.24	32.69	123.	4.62	33.14
57.	6.20	32.69	127.	4.40	33.24
60.	6.18	32.69	129.	4.40	33.26
62.	6.18	32.70	132.	4.32	33.34
65.	6.15	32.71	135.	4.36	33.39
68.	6.16	32.71	141.	4.31	33.50
72.	6.12	32.71	142.	4.23	33.52
77.	5.97	32.71	150.	4.21	33.59

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 76

DATE 6/ 6/70

POSITION 50-11.0N, 145- 4.0W GMT 0.4

RESULTS OF STD CAST 28 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.21	32.65	0	25.57	242.9	0.0	0.0	1477.
10	7.21	32.65	10	25.57	243.3	0.24	0.01	1477.
20	7.14	32.65	20	25.58	242.4	0.49	0.05	1477.
30	7.09	32.65	30	25.58	242.0	0.73	0.11	1477.
50	6.45	32.67	50	25.68	232.7	1.21	0.31	1475.
75	6.02	32.70	75	25.76	225.2	1.78	0.67	1473.
100	5.07	32.81	99	25.95	207.1	2.32	1.15	1470.
125	4.52	33.15	124	26.29	175.6	2.81	1.71	1469.
150	4.20	33.59	149	26.67	139.8	3.19	2.24	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.21	32.65	94.	5.21	32.77
12.	7.21	32.65	99.	5.09	32.80
21.	7.13	32.65	106.	4.98	32.84
24.	7.13	32.65	112.	4.82	32.89
27.	7.09	32.65	117.	4.75	32.94
34.	7.09	32.65	118.	4.76	32.99
43.	7.05	32.65	120.	4.75	33.02
46.	6.98	32.65	128.	4.39	33.23
50.	6.45	32.67	130.	4.41	33.24
51.	6.30	32.67	132.	4.33	33.32
54.	6.21	32.68	136.	4.35	33.42
72.	6.11	32.70	143.	4.28	33.56
79.	5.90	32.71	146.	4.21	33.57
88.	5.29	32.75	153.	4.20	33.60

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 77

DATE 6/ 6/70

POSITION 50-11.0N. 145- 4.0W

GMT 0.5

RESULTS OF STP CAST

38 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.21	32.64	0	25.56	243.6	0.0	0.0	1477.
10	7.16	32.64	10	25.57	243.3	0.24	0.01	1477.
20	7.12	32.64	20	25.57	242.7	0.49	0.05	1477.
30	7.09	32.65	30	25.58	242.0	0.73	0.11	1477.
50	6.75	32.66	50	25.64	236.8	1.21	0.31	1476.
75	6.03	32.71	75	25.77	224.9	1.78	0.67	1473.
100	5.10	32.80	99	25.54	208.2	2.32	1.15	1470.
125	4.66	33.11	124	26.24	180.1	2.81	1.71	1469.
150	4.21	33.59	149	26.67	139.6	3.20	2.26	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.21	32.64	86.	5.36	32.74
8.	7.19	32.64	89.	5.28	32.75
11.	7.14	32.64	92.	5.26	32.76
18.	7.14	32.64	94.	5.16	32.77
22.	7.11	32.65	101.	5.09	32.80
40.	7.07	32.65	109.	4.92	32.87
45.	7.04	32.66	110.	4.85	32.88
48.	6.95	32.66	117.	4.79	32.93
52.	6.55	32.67	118.	4.74	32.96
53.	6.33	32.67	122.	4.74	33.02
56.	6.22	32.67	127.	4.61	33.17
59.	6.18	32.69	128.	4.61	33.20
63.	6.19	32.70	130.	4.40	33.22
71.	6.15	32.71	131.	4.40	33.22
74.	6.10	32.71	133.	4.33	33.32
76.	5.97	32.71	136.	4.36	33.37
78.	5.90	32.72	143.	4.30	33.53
81.	5.68	32.72	147.	4.23	33.57
83.	5.65	32.73	150.	4.21	33.59

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 78

DATE 6/ 6/70

POSITION 50-11.0N, 145- 4.0W GMT 0.6

RESULTS OF STD CAST 36 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.23	32.64	0	25.56	243.9	0.0	0.0	1477.
10	7.18	32.65	10	25.57	243.0	0.24	0.01	1477.
20	7.11	32.65	20	25.58	242.1	0.49	0.05	1477.
30	7.09	32.65	30	25.58	241.9	0.73	0.11	1477.
50	6.40	32.66	50	25.68	232.8	1.21	0.31	1474.
75	5.98	32.70	75	25.76	225.1	1.78	0.67	1473.
100	5.09	32.80	99	25.95	207.4	2.32	1.15	1470.
125	4.66	33.10	124	26.24	180.5	2.81	1.71	1469.
150	4.24	33.57	149	26.65	141.4	3.21	2.27	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.23	32.64	79.	5.85	32.71
5.	7.19	32.64	82.	5.65	32.72
11.	7.18	32.65	84.	5.59	32.73
16.	7.16	32.65	87.	5.35	32.73
17.	7.13	32.65	90.	5.26	32.75
22.	7.10	32.65	93.	5.16	32.77
40.	7.07	32.65	99.	5.11	32.80
45.	7.01	32.65	108.	4.92	32.84
47.	6.91	32.66	111.	4.82	32.89
51.	6.23	32.66	118.	4.73	32.98
53.	6.19	32.67	122.	4.73	33.03
55.	6.19	32.67	128.	4.60	33.18
57.	6.18	32.68	132.	4.40	33.24
59.	6.19	32.68	134.	4.41	33.25
67.	6.17	32.70	138.	4.32	33.39
68.	6.17	32.70	140.	4.36	33.42
73.	6.07	32.70	147.	4.31	33.52
77.	5.90	32.70	150.	4.24	33.57



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 80

DATE 6/ 6/70

POSITION 50- 8.0N. 145- 4.0W GMT 3.0

RESULTS OF STP CAST 31 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.13	32.66	0	25.58	241.1	0.0	0.0	1476.
10	7.13	32.66	10	25.58	241.4	0.24	0.01	1477.
20	7.12	32.66	20	25.59	241.4	0.48	0.05	1477.
30	7.04	32.66	30	25.60	240.5	0.72	0.11	1477.
50	6.20	32.66	50	25.71	230.3	1.20	0.30	1474.
75	5.41	32.72	75	25.85	217.0	1.76	0.66	1471.
100	5.13	32.79	99	25.94	209.0	2.30	1.14	1470.
125	4.58	33.09	124	26.23	180.7	2.79	1.71	1469.
150	4.15	33.58	149	26.67	139.8	3.19	2.26	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.13	32.66	83.	5.37	32.74
19.	7.13	32.66	87.	5.33	32.76
22.	7.09	32.66	90.	5.32	32.77
28.	7.07	32.66	96.	5.17	32.78
30.	7.04	32.66	104.	5.10	32.80
37.	6.98	32.66	108.	4.97	32.83
40.	6.90	32.66	118.	4.78	32.91
43.	6.61	32.66	130.	4.44	33.22
48.	6.21	32.66	131.	4.44	33.24
60.	6.18	32.67	133.	4.39	33.28
64.	6.12	32.69	135.	4.44	33.34
68.	5.90	32.70	138.	4.35	33.39
72.	5.47	32.72	145.	4.19	33.51
75.	5.41	32.72	150.	4.15	33.58
78.	5.38	32.73	155.	4.05	33.64
80.	5.35	32.74			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 81

DATE 6/ 6/70

POSITION 50- 2.0N, 145- 1.0W GMT 5.8

RESULTS OF STP CAST 24 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.14	32.65	0	25.58	242.0	0.0	0.0	1477.
10	7.14	32.65	10	25.58	242.4	0.24	0.01	1477.
20	7.14	32.65	20	25.58	242.5	0.48	0.05	1477.
30	7.04	32.65	30	25.59	241.3	0.73	0.11	1477.
50	6.30	32.66	50	25.69	231.6	1.20	0.30	1474.
75	5.63	32.71	75	25.82	220.0	1.77	0.67	1472.
100	5.18	32.79	99	25.93	209.5	2.31	1.14	1470.
125	4.38	33.26	124	26.39	165.8	2.79	1.69	1468.
150	4.25	33.55	149	26.63	142.9	3.17	2.22	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.14	32.65	95.	5.19	32.78
24.	7.14	32.65	100.	5.18	32.79
27.	7.11	32.65	108.	4.92	32.86
43.	6.75	32.65	111.	4.88	32.89
50.	6.30	32.66	114.	4.74	32.94
52.	6.22	32.66	118.	4.69	33.08
63.	6.18	32.68	119.	4.63	33.12
67.	6.13	32.69	120.	4.63	33.17
77.	5.51	32.72	126.	4.33	33.28
80.	5.52	32.73	138.	4.23	33.43
85.	5.29	32.74	140.	4.25	33.46
93.	5.16	32.76	152.	4.25	33.57

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 82

DATE 6/ 6/70

POSITION 49-59.0N. 145- 0.0W GMT 16.5

RESULTS OF STP CAST

28 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.16	32.65	0	25.57	242.2	0.0	0.0	1477.
10	7.15	32.65	10	25.57	242.4	0.24	0.01	1477.
20	7.14	32.65	20	25.58	242.4	0.48	0.05	1477.
30	7.05	32.65	30	25.59	241.4	0.73	0.11	1477.
50	6.20	32.67	50	25.71	229.8	1.20	0.30	1474.
75	5.59	32.74	75	25.84	217.5	1.76	0.66	1472.
100	5.09	32.80	99	25.95	207.7	2.29	1.13	1470.
125	4.55	33.11	124	26.26	178.6	2.78	1.69	1469.
150	4.18	33.60	149	26.68	138.2	3.17	2.24	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.16	32.65	97.	5.18	32.80
27.	7.13	32.65	100.	5.09	32.80
37.	6.86	32.65	105.	4.95	32.85
45.	6.37	32.66	115.	4.82	32.94
52.	6.13	32.67	119.	4.66	33.02
55.	6.12	32.68	122.	4.57	33.05
60.	6.15	32.69	124.	4.57	33.09
65.	6.08	32.71	135.	4.32	33.35
68.	6.08	32.71	137.	4.32	33.40
75.	5.59	32.74	143.	4.25	33.49
76.	5.58	32.74	145.	4.26	33.53
80.	5.39	32.76	147.	4.20	33.57
89.	5.31	32.78	149.	4.20	33.60
94.	5.19	32.79	155.	4.11	33.63

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 83

DATE 7/ 6/70

POSITION 50- 0.0N, 144-57.0W GMT 4.5

RESULTS OF STP CAST 31 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.21	32.66	0	25.57	242.1	0.0	0.0	1477.
10	7.21	32.66	10	25.58	242.2	0.24	0.01	1477.
20	7.20	32.67	20	25.58	242.0	0.48	0.05	1477.
30	7.15	32.67	30	25.59	241.3	0.73	0.11	1477.
50	6.23	32.70	50	25.74	227.5	1.19	0.30	1474.
75	5.78	32.74	75	25.82	219.7	1.76	0.66	1472.
100	5.27	32.78	99	25.91	211.5	2.29	1.13	1471.
125	4.80	32.97	124	26.12	191.7	2.80	1.72	1470.
150	4.33	33.54	149	26.62	144.3	3.21	2.29	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.21	32.66	84.	5.33	32.76
28.	7.20	32.67	90.	5.33	32.76
31.	7.13	32.67	94.	5.32	32.77
34.	6.95	32.68	104.	5.23	32.73
35.	6.95	32.68	105.	5.18	32.78
36.	6.78	32.68	110.	5.17	32.81
44.	6.55	32.69	112.	5.12	32.82
48.	6.27	32.70	114.	5.09	32.83
53.	6.17	32.71	118.	4.92	32.85
58.	6.17	32.71	123.	4.87	32.91
60.	6.15	32.71	132.	4.55	33.20
65.	6.13	32.72	139.	4.50	33.39
73.	5.76	32.73	145.	4.31	33.49
75.	5.78	32.74	149.	4.34	33.54
77.	5.52	32.74	152.	4.32	33.55
80.	5.40	32.75			



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 84

DATE 7/ 6/70

POSITION 50- 3.0N, 144-58.0W GMT 16.6

RESULTS OF STD CAST 30 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.08	32.65	0	25.58	241.2	0.0	0.0	1476.
10	7.08	32.65	10	25.58	241.5	0.24	0.01	1476.
20	7.08	32.65	20	25.58	241.7	0.48	0.05	1477.
30	7.08	32.65	30	25.58	241.8	0.72	0.11	1477.
50	6.13	32.70	50	25.75	226.6	1.19	0.30	1473.
75	5.55	32.74	75	25.85	217.0	1.75	0.66	1472.
100	5.21	32.79	99	25.93	209.8	2.28	1.13	1471.
125	4.59	33.25	124	26.36	168.6	2.76	1.67	1469.
150	4.29	33.61	149	26.67	139.1	3.14	2.20	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.08	32.65	88.	5.34	32.78
35.	7.08	32.65	91.	5.37	32.78
37.	7.05	32.67	97.	5.26	32.78
42.	6.30	32.69	103.	5.17	32.80
45.	6.16	32.69	117.	4.63	33.12
47.	6.17	32.70	126.	4.58	33.27
50.	6.13	32.70	127.	4.53	33.29
52.	6.14	32.70	135.	4.45	33.42
58.	6.08	32.70	139.	4.38	33.48
62.	6.09	32.71	140.	4.37	33.48
69.	5.87	32.72	142.	4.32	33.50
77.	5.45	32.75	144.	4.35	33.55
78.	5.44	32.75	147.	4.29	33.57
80.	5.35	32.76	148.	4.30	33.60
82.	5.34	32.76	155.	4.28	33.63

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 85

DATE 8/ 6/70

POSITION 49-58.0N, 145- 4.0W GMT 4.5

RESULTS OF STP CAST 34 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.24	32.65	0	25.56	243.3	0.0	0.0	1477.
10	7.24	32.66	10	25.57	243.1	0.24	0.01	1477.
20	7.22	32.66	20	25.57	242.8	0.49	0.05	1477.
30	7.10	32.67	30	25.60	240.7	0.73	0.11	1477.
50	6.10	32.69	50	25.74	226.7	1.19	0.30	1473.
75	6.01	32.74	75	25.80	222.0	1.76	0.66	1473.
100	5.18	32.79	99	25.93	209.5	2.29	1.13	1470.
125	4.64	33.16	124	26.28	176.2	2.79	1.70	1469.
150	4.19	33.59	149	26.67	139.0	3.18	2.24	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.24	32.65	96.	5.21	32.78
15.	7.24	32.66	101.	5.17	32.79
22.	7.21	32.66	102.	5.17	32.79
31.	7.09	32.67	108.	5.11	32.81
37.	6.55	32.67	114.	5.03	32.88
39.	6.46	32.67	117.	4.91	32.92
45.	6.20	32.67	119.	4.87	32.98
48.	6.10	32.69	123.	4.73	33.10
55.	6.10	32.70	127.	4.56	33.22
58.	6.11	32.70	134.	4.39	33.38
64.	6.11	32.72	139.	4.37	33.44
68.	6.10	32.72	141.	4.34	33.47
73.	6.06	32.73	143.	4.33	33.49
77.	5.96	32.76	144.	4.24	33.53
83.	5.46	32.77	148.	4.22	33.58
87.	5.32	32.77	152.	4.16	33.61
95.	5.24	32.78	155.	4.15	33.63

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 86

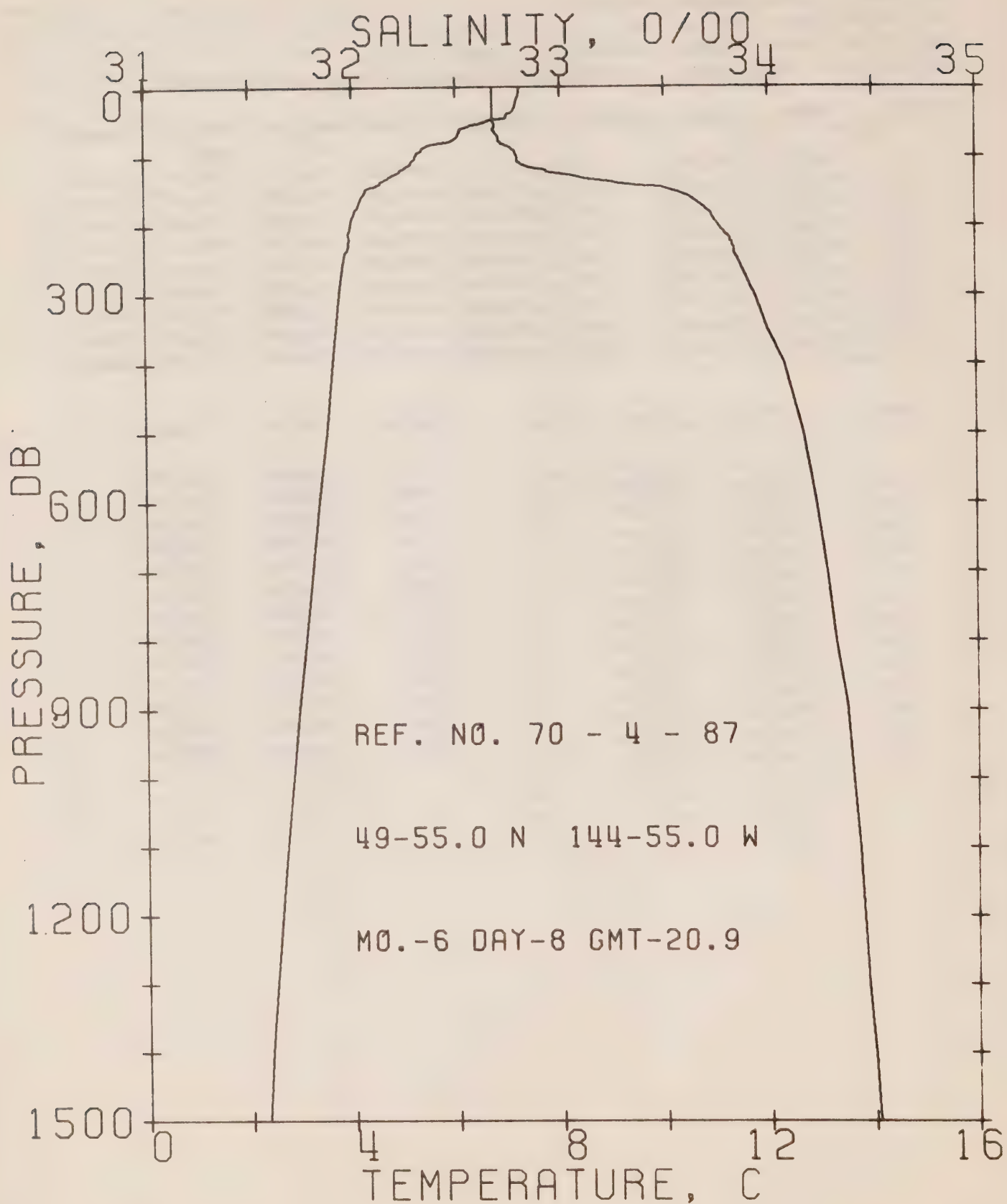
DATE 8/ 6/70

POSITION 49-57.0N. 144-59.0W GMT 16.5

RESULTS OF STP CAST 27 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.06	32.67	0	25.60	239.5	0.0	0.0	1476.
10	7.06	32.67	10	25.60	239.8	0.24	0.01	1476.
20	7.06	32.67	20	25.60	239.9	0.48	0.05	1477.
30	7.04	32.67	30	25.60	239.9	0.72	0.11	1477.
50	6.18	32.69	50	25.73	227.9	1.19	0.30	1474.
75	5.57	32.73	75	25.84	218.1	1.75	0.66	1472.
100	5.19	32.80	99	25.94	208.9	2.28	1.13	1471.
125	4.67	33.14	124	26.26	178.2	2.77	1.69	1469.
150	4.26	33.56	143	26.64	142.1	3.16	2.23	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.06	32.67	90.	5.28	32.77
27.	7.06	32.67	99.	5.22	32.79
33.	7.03	32.67	108.	4.98	32.87
38.	6.94	32.68	116.	4.81	32.98
45.	6.40	32.69	119.	4.79	33.03
51.	6.14	32.69	121.	4.74	33.06
54.	6.10	32.69	123.	4.73	33.09
58.	6.12	32.69	129.	4.55	33.23
65.	6.09	32.70	132.	4.41	33.34
69.	5.97	32.70	137.	4.33	33.43
75.	5.57	32.73	143.	4.32	33.50
80.	5.35	32.76	146.	4.27	33.55
83.	5.35	32.76	155.	4.25	33.58
87.	5.28	32.76			





PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 87

DATE 8/ 6/70

POSITION 49-55.0N, 144-55.0W GMT 20.9

RESULTS OF STD CAST 84 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.28	32.68	0	25.58	241.5	0.0	0.0	1477.
10	7.25	32.68	10	25.58	241.4	0.24	0.01	1477.
20	7.20	32.68	20	25.59	241.0	0.48	0.05	1477.
30	7.17	32.68	30	25.60	240.7	0.72	0.11	1477.
50	6.62	32.68	50	25.67	233.7	1.20	0.31	1475.
75	6.01	32.71	75	25.77	224.7	1.77	0.67	1473.
100	5.27	32.80	99	25.93	209.7	2.31	1.15	1471.
125	4.88	32.99	124	26.13	191.1	2.82	1.73	1470.
150	4.28	33.54	149	26.62	144.0	3.24	2.32	1469.
175	4.12	33.70	174	26.77	130.7	3.58	2.88	1468.
200	3.99	33.76	199	26.83	124.7	3.90	3.49	1468.
225	3.93	33.83	223	26.89	119.4	4.20	4.15	1469.
250	3.85	33.86	248	26.92	116.5	4.50	4.86	1469.
300	3.76	33.94	298	26.99	110.0	5.07	6.45	1469.
400	3.63	34.08	397	27.12	99.0	6.11	10.18	1471.
500	3.50	34.17	496	27.20	91.6	7.07	14.53	1472.
600	3.35	34.23	595	27.26	86.3	7.96	19.51	1473.
800	3.08	34.32	793	27.36	78.1	9.60	31.18	1475.
1000	2.81	34.40	990	27.45	70.6	11.07	44.68	1477.
1200	2.59	34.45	1188	27.51	65.6	12.43	59.90	1480.
1500	2.30	34.52	1484	27.59	58.8	14.30	85.46	1484.

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 89

DATE 9/ 6/70

POSITION 50- 0.0N, 144-56.0W GMT 4.5

RESULTS OF STP CAST 31 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.35	32.66	0	25.55	244.0	0.0	0.0	1477.
10	7.35	32.66	10	25.55	244.3	0.24	0.01	1478.
20	7.34	32.66	20	25.56	244.3	0.49	0.05	1478.
30	7.15	32.67	30	25.59	241.2	0.73	0.11	1477.
50	6.10	32.68	50	25.74	227.6	1.20	0.30	1473.
75	5.85	32.73	75	25.80	221.3	1.77	0.66	1473.
100	5.15	32.78	99	25.93	209.9	2.30	1.14	1470.
125	4.71	33.02	124	26.16	187.6	2.81	1.72	1469.
150	4.36	33.53	149	26.61	145.3	3.22	2.29	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.35	32.66	81.	5.60	32.74
12.	7.35	32.66	93.	5.43	32.75
22.	7.34	32.66	89.	5.28	32.76
26.	7.18	32.67	90.	5.28	32.76
33.	7.12	32.67	96.	5.18	32.77
46.	6.40	32.67	108.	5.10	32.80
49.	6.11	32.68	123.	4.79	32.97
53.	6.08	32.69	126.	4.67	33.04
58.	6.07	32.69	130.	4.63	33.09
60.	6.07	32.69	133.	4.55	33.23
62.	6.05	32.71	135.	4.55	33.27
65.	6.05	32.71	138.	4.44	33.33
67.	6.02	32.71	142.	4.44	33.42
69.	6.02	32.71	148.	4.37	33.52
75.	5.85	32.73	152.	4.36	33.55
78.	5.63	32.74			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 90

DATE 9/ 6/70

POSITION 49-57.0N, 144-58.0W GMT 16.5

RESULTS OF STP CAST 35 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.25	32.67	0	25.58	241.9	0.0	0.0	1477.
10	7.25	32.67	10	25.58	242.0	0.24	0.01	1477.
20	7.24	32.68	20	25.58	241.9	0.48	0.05	1477.
30	7.24	32.68	30	25.59	241.7	0.73	0.11	1477.
50	6.49	32.70	50	25.70	231.0	1.20	0.30	1475.
75	6.06	32.73	75	25.78	223.6	1.77	0.66	1474.
100	5.21	32.80	99	25.93	209.0	2.30	1.14	1471.
125	4.71	33.11	124	26.24	180.6	2.80	1.71	1459.
150	4.24	33.60	149	26.67	139.2	3.19	2.26	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.25	32.67	102.	5.21	32.81
31.	7.24	32.68	104.	5.13	32.82
38.	7.21	32.68	105.	5.13	32.83
43.	7.00	32.69	107.	5.07	32.85
44.	6.77	32.69	109.	5.07	32.86
46.	6.71	32.70	114.	5.00	32.92
51.	6.44	32.70	117.	4.92	32.96
55.	6.17	32.70	119.	4.77	33.02
64.	6.13	32.72	125.	4.71	33.11
74.	6.09	32.73	129.	4.57	33.25
78.	5.98	32.74	131.	4.55	33.27
84.	5.41	32.74	132.	4.52	33.31
87.	5.39	32.76	135.	4.51	33.35
88.	5.34	32.76	139.	4.47	33.39
90.	5.32	32.77	145.	4.32	33.53
96.	5.22	32.78	150.	4.24	33.60
98.	5.23	32.79	152.	4.25	33.63
100.	5.21	32.80			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 91

DATE 10/ 6/70

POSITION 49-56.0N, 144-59.0W GMT 4.6

RESULTS OF STD CAST 30 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.34	32.68	0	25.57	242.4	0.0	0.0	1477.
10	7.33	32.68	10	25.57	242.6	0.24	0.01	1477.
20	7.32	32.68	20	25.57	242.6	0.49	0.05	1478.
30	7.24	32.68	30	25.59	241.6	0.73	0.11	1477.
50	6.61	32.70	50	25.68	232.4	1.20	0.30	1475.
75	5.42	32.75	75	25.87	214.9	1.76	0.66	1471.
100	5.23	32.80	99	25.93	209.1	2.29	1.13	1471.
125	4.53	33.24	124	26.35	169.3	2.79	1.70	1469.
150	4.25	33.60	149	26.67	139.2	3.17	2.23	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.34	32.68	85.	5.32	32.77
17.	7.33	32.68	92.	5.31	32.78
25.	7.30	32.68	97.	5.24	32.79
30.	7.24	32.68	99.	5.24	32.80
35.	7.05	32.70	104.	5.18	32.81
42.	7.04	32.70	107.	5.08	32.84
45.	7.00	32.70	109.	5.06	32.85
53.	6.38	32.70	113.	4.96	32.89
56.	6.15	32.70	116.	4.94	32.94
62.	6.12	32.72	122.	4.75	33.10
63.	6.10	32.72	123.	4.60	33.19
65.	6.13	32.73	126.	4.50	33.26
68.	6.11	32.74	141.	4.29	33.51
75.	5.42	32.75	150.	4.25	33.60
80.	5.34	32.76	154.	4.21	33.65



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 92

DATE 10/ 6/70

POSITION 49-58.0N, 145- 3.0W GMT 16.5

RESULTS OF STP CAST 30 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.32	32.68	0	25.57	242.1	0.0	0.0	1477.
10	7.32	32.68	10	25.57	242.4	0.24	0.01	1477.
20	7.32	32.68	20	25.57	242.6	0.48	0.05	1478.
30	7.20	32.68	30	25.59	240.9	0.73	0.11	1477.
50	6.13	32.71	50	25.76	225.5	1.19	0.30	1473.
75	5.29	32.78	75	25.91	210.8	1.74	0.65	1470.
100	5.14	32.83	99	25.97	206.0	2.26	1.11	1470.
125	4.49	33.19	124	26.32	172.3	2.75	1.67	1469.
150	4.22	33.60	149	26.68	139.0	3.12	2.20	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.32	32.68	77.	5.29	32.79
21.	7.32	32.68	79.	5.27	32.79
26.	7.28	32.68	87.	5.22	32.79
28.	7.24	32.68	91.	5.22	32.80
33.	7.13	32.69	103.	5.11	32.84
39.	6.36	32.69	110.	5.02	32.90
44.	6.13	32.69	117.	4.83	33.00
49.	6.13	32.71	119.	4.82	33.01
58.	6.10	32.74	125.	4.49	33.19
60.	6.07	32.74	128.	4.42	33.30
65.	5.51	32.75	132.	4.39	33.41
67.	5.38	32.75	138.	4.32	33.48
70.	5.38	32.77	144.	4.30	33.53
71.	5.39	32.77	150.	4.22	33.60
73.	5.29	32.78	157.	4.19	33.65

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 93

DATE 11/ 6/70

POSITION 49-59.0N, 145- 4.0W GMT 4.5

RESULTS OF STD CAST 38 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.51	32.68	0	25.55	244.5	0.0	0.0	1478.
10	7.51	32.68	10	25.55	244.9	0.24	0.01	1478.
20	7.47	32.68	20	25.55	244.6	0.49	0.05	1478.
30	7.35	32.68	30	25.57	242.8	0.73	0.11	1478.
50	6.43	32.70	50	25.71	230.2	1.21	0.31	1475.
75	5.52	32.76	75	25.87	215.3	1.77	0.66	1471.
100	5.14	32.80	99	25.94	208.4	2.30	1.13	1470.
125	4.56	33.15	124	26.28	176.2	2.79	1.70	1469.
150	4.24	33.57	149	26.65	141.7	3.18	2.24	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.51	32.68	90.	5.31	32.79
10.	7.51	32.68	93.	5.24	32.79
17.	7.49	32.68	95.	5.25	32.79
27.	7.43	32.68	101.	5.12	32.80
35.	7.21	32.69	106.	5.11	32.81
40.	7.12	32.70	110.	5.01	32.89
45.	6.67	32.70	117.	4.81	32.96
48.	6.60	32.70	119.	4.80	32.98
53.	6.18	32.70	122.	4.73	33.02
54.	6.13	32.70	124.	4.58	33.12
57.	6.13	32.71	127.	4.51	33.20
65.	6.09	32.74	131.	4.50	33.26
68.	5.99	32.75	133.	4.40	33.36
72.	5.76	32.75	138.	4.32	33.46
74.	5.54	32.76	143.	4.29	33.51
76.	5.51	32.76	148.	4.24	33.56
77.	5.44	32.77	151.	4.24	33.57
81.	5.43	32.78	153.	4.21	33.58
82.	5.39	32.78	155.	4.24	33.61

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 94

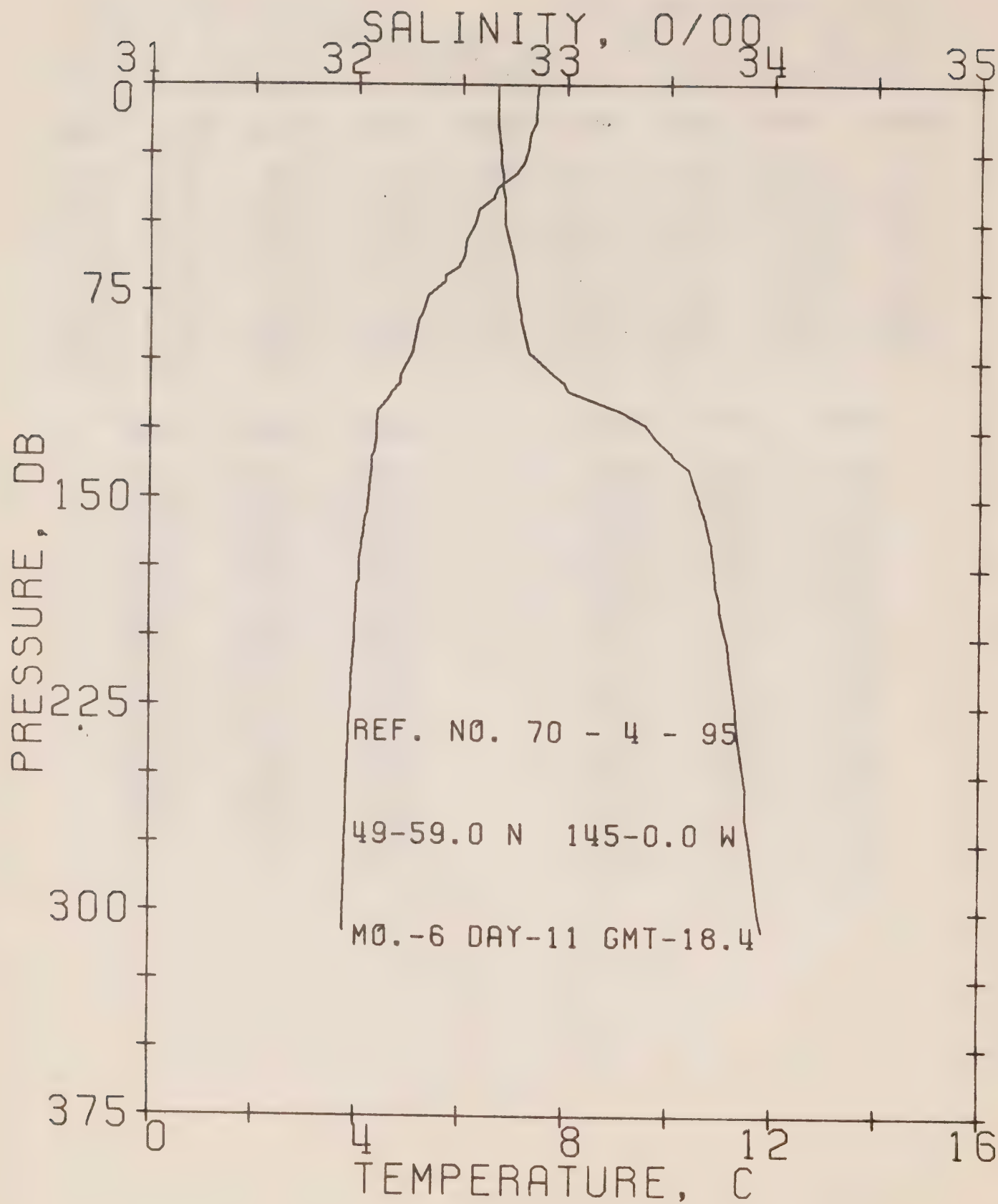
DATE 11/ 6/70

POSITION 50- 0.0N, 145- 2.0W GMT 16.5

RESULTS OF STP CAST 35 POINTS TAKEN FROM ANALCG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.43	32.67	0	25.55	244.3	0.0	0.0	1478.
10	7.43	32.67	10	25.55	244.4	0.24	0.01	1478.
20	7.42	32.68	20	25.56	244.1	0.49	0.05	1478.
30	7.41	32.68	30	25.56	243.9	0.73	0.11	1478.
50	6.67	32.69	50	25.67	234.0	1.21	0.31	1476.
75	5.83	32.71	75	25.79	222.1	1.78	0.67	1473.
100	5.11	32.80	99	25.95	207.7	2.31	1.14	1470.
125	4.65	33.18	124	26.30	174.9	2.81	1.71	1469.
150	4.25	33.58	149	26.66	140.8	3.19	2.25	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.43	32.67	86.	5.32	32.76
29.	7.42	32.68	89.	5.26	32.77
31.	7.40	32.68	92.	5.26	32.78
34.	7.27	32.68	103.	5.05	32.81
37.	7.21	32.68	108.	5.02	32.84
38.	7.08	32.68	110.	4.97	32.86
46.	7.02	32.69	117.	4.89	32.92
49.	6.69	32.69	118.	4.89	32.96
51.	6.66	32.69	124.	4.71	33.14
53.	6.44	32.69	127.	4.52	33.25
58.	6.14	32.69	130.	4.46	33.29
63.	6.12	32.70	135.	4.43	33.36
65.	6.05	32.70	139.	4.31	33.48
67.	6.03	32.70	144.	4.29	33.53
72.	5.94	32.70	147.	4.26	33.55
76.	5.79	32.72	151.	4.25	33.59
77.	5.61	32.72	155.	4.17	33.63
83.	5.33	32.75			





PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 95

DATE 11/ 6/70

POSITION 49-59.0N, 145- 0.0W GMT 18.4

RESULTS OF STP CAST 57 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.47	32.67	0	25.55	244.8	0.0	0.0	1478.
10	7.43	32.67	10	25.55	244.7	0.24	0.01	1478.
20	7.31	32.68	20	25.58	242.1	0.49	0.05	1478.
30	7.14	32.69	30	25.61	239.3	0.73	0.11	1477.
50	6.28	32.71	50	25.74	227.6	1.19	0.30	1474.
75	5.44	32.77	75	25.88	213.6	1.75	0.65	1471.
100	4.98	32.87	99	26.02	200.9	2.27	1.12	1470.
125	4.38	33.41	124	26.51	154.6	2.72	1.63	1468.
150	4.23	33.65	149	26.71	135.3	3.07	2.13	1468.
175	4.05	33.72	174	26.79	128.1	3.40	2.67	1468.
200	3.97	33.78	199	26.85	123.1	3.72	3.27	1468.
225	3.89	33.83	223	26.89	119.2	4.02	3.93	1468.
250	3.83	33.87	248	26.93	115.6	4.31	4.64	1469.
300	3.75	33.94	298	26.99	109.9	4.88	6.22	1469.

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 96

DATE 12/ 6/70

POSITION 50- 7.0N, 144-58.0W GMT 4.5

RESULTS OF STP CAST 31 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.49	32.64	0	25.52	247.3	0.0	0.0	1478.
10	7.49	32.64	10	25.52	247.6	0.25	0.01	1478.
20	7.47	32.64	20	25.52	247.5	0.50	0.05	1478.
30	7.25	32.66	30	25.57	243.3	0.74	0.11	1477.
50	6.13	32.71	50	25.75	225.7	1.20	0.30	1473.
75	6.06	32.74	75	25.79	223.0	1.76	0.66	1474.
100	5.20	32.78	99	25.92	210.6	2.30	1.14	1471.
125	4.69	33.08	124	26.21	182.8	2.81	1.72	1469.
150	4.36	33.52	149	26.60	146.4	3.21	2.28	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.49	32.64	92.	5.32	32.76
16.	7.49	32.64	101.	5.19	32.78
17.	7.47	32.64	107.	5.15	32.79
21.	7.47	32.64	113.	5.07	32.82
22.	7.44	32.64	119.	4.82	32.94
27.	7.42	32.65	120.	4.82	32.95
30.	7.25	32.66	129.	4.59	33.18
32.	6.61	32.68	133.	4.56	33.27
40.	6.37	32.70	135.	4.50	33.31
44.	6.17	32.70	137.	4.50	33.33
50.	6.13	32.71	140.	4.47	33.35
68.	6.11	32.73	142.	4.43	33.41
75.	6.06	32.74	145.	4.42	33.46
81.	5.92	32.74	150.	4.36	33.52
84.	5.65	32.75	152.	4.29	33.54
89.	5.50	32.76			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 97

DATE 12/ 6/70

POSITION 50- 3.0N, 144-56.0W GMT 16.5

RESULTS OF STP CAST 30 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.46	32.66	0	25.54	245.4	0.0	0.0	1478.
10	7.46	32.66	10	25.54	245.8	0.25	0.01	1478.
20	7.46	32.66	20	25.54	245.9	0.49	0.05	1478.
30	7.46	32.66	30	25.54	246.1	0.74	0.11	1478.
50	6.37	32.68	50	25.70	230.6	1.22	0.31	1474.
75	5.76	32.75	75	25.83	218.9	1.78	0.67	1472.
100	5.16	32.79	99	25.93	209.0	2.31	1.14	1470.
125	4.71	33.06	124	26.20	184.3	2.81	1.71	1469.
150	4.40	33.56	149	26.63	143.8	3.22	2.28	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.46	32.66	108.	5.11	32.82
30.	7.46	32.66	109.	5.05	32.83
37.	7.39	32.67	114.	4.93	32.89
40.	7.20	32.68	117.	4.91	32.90
48.	6.45	32.68	123.	4.79	33.01
52.	6.30	32.69	127.	4.63	33.11
56.	6.16	32.69	130.	4.65	33.13
62.	6.10	32.71	132.	4.52	33.21
64.	6.10	32.71	136.	4.41	33.34
69.	6.05	32.72	142.	4.38	33.45
78.	5.61	32.76	145.	4.40	33.46
83.	5.45	32.77	147.	4.34	33.49
89.	5.32	32.78	149.	4.34	33.55
92.	5.23	32.78	150.	4.40	33.56
99.	5.17	32.79	153.	4.40	33.59

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 98

DATE 13/ 6/70

POSITION 49-58.0N, 145- 3.0W GMT 4.5

RESULTS OF STP CAST 37 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.68	32.67	0	25.52	247.6	0.0	0.0	1479.
10	7.67	32.67	10	25.52	247.9	0.25	0.01	1479.
20	7.56	32.67	20	25.53	246.4	0.50	0.05	1478.
30	7.42	32.67	30	25.55	244.8	0.74	0.11	1478.
50	6.12	32.71	50	25.75	225.7	1.21	0.30	1473.
75	5.55	32.77	75	25.87	214.5	1.76	0.65	1472.
100	5.12	32.82	99	25.96	206.3	2.28	1.12	1470.
125	4.53	33.25	124	26.37	168.2	2.76	1.67	1469.
150	4.22	33.64	149	26.71	136.0	3.14	2.19	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.68	32.67	88.	5.20	32.80
16.	7.67	32.67	90.	5.20	32.80
22.	7.50	32.67	93.	5.16	32.81
27.	7.48	32.67	98.	5.14	32.82
33.	7.36	32.67	103.	5.10	32.83
39.	6.50	32.69	109.	4.88	32.94
45.	6.19	32.70	112.	4.88	32.96
48.	6.14	32.71	116.	4.78	33.01
52.	6.11	32.71	118.	4.77	33.06
55.	6.11	32.72	119.	4.72	33.09
61.	5.84	32.73	122.	4.68	33.13
63.	5.83	32.76	125.	4.53	33.25
65.	5.70	32.77	130.	4.50	33.30
70.	5.70	32.77	133.	4.36	33.39
72.	5.60	32.77	138.	4.31	33.51
74.	5.58	32.77	146.	4.27	33.59
77.	5.48	32.78	150.	4.22	33.64
79.	5.46	32.78	151.	4.20	33.65
86.	5.23	32.79			



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4- 99

DATE 13/ 6/70

POSITION 49-59.0N. 145- 3.0W GMT 16.5

RESULTS OF STD CAST 36 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.58	32.67	0	25.53	246.3	0.0	0.0	1478.
10	7.58	32.67	10	25.53	246.5	0.25	0.01	1478.
20	7.57	32.67	20	25.53	246.7	0.49	0.05	1479.
30	7.57	32.67	30	25.53	246.7	0.74	0.11	1479.
50	6.46	32.68	50	25.69	232.0	1.23	0.31	1475.
75	5.77	32.74	75	25.82	219.5	1.79	0.67	1472.
100	5.20	32.78	99	25.92	210.1	2.33	1.15	1471.
125	4.73	33.10	124	26.23	181.5	2.83	1.72	1469.
150	4.31	33.52	149	26.60	145.9	3.23	2.28	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.58	32.67	90.	5.30	32.76
30.	7.57	32.67	93.	5.28	32.77
36.	7.53	32.67	95.	5.24	32.78
39.	7.46	32.67	98.	5.23	32.78
45.	7.23	32.68	102.	5.18	32.79
47.	6.63	32.68	108.	5.05	32.82
55.	6.17	32.68	110.	5.05	32.83
58.	6.16	32.68	116.	4.93	32.88
66.	6.09	32.70	118.	4.92	32.93
69.	6.02	32.72	121.	4.85	32.96
71.	6.05	32.73	122.	4.85	33.00
73.	6.00	32.74	125.	4.73	33.10
76.	5.65	32.74	128.	4.67	33.17
78.	5.59	32.74	129.	4.61	33.18
82.	5.55	32.74	137.	4.39	33.35
84.	5.52	32.74	145.	4.33	33.50
87.	5.35	32.75	150.	4.31	33.52
89.	5.34	32.76	155.	4.25	33.58

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-100

DATE 14/ 6/70

POSITION 49-58.0N, 145- 2.0W GMT 4.5

RESULTS OF STP CAST

36 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.75	32.68	0	25.51	247.8	0.0	0.0	1479.
10	7.75	32.68	10	25.51	248.2	0.25	0.01	1479.
20	7.72	32.68	20	25.52	247.9	0.50	0.05	1479.
30	7.60	32.68	30	25.54	246.5	0.74	0.11	1479.
50	6.22	32.68	50	25.72	229.1	1.22	0.31	1474.
75	5.43	32.76	75	25.88	214.4	1.78	0.66	1471.
100	5.21	32.78	99	25.92	210.4	2.31	1.13	1471.
125	4.77	33.07	124	26.19	184.5	2.82	1.71	1470.
150	4.35	33.57	149	26.64	142.5	3.21	2.27	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.75	32.68	68.	5.82	32.75
14.	7.75	32.68	69.	5.67	32.75
17.	7.72	32.68	77.	5.35	32.76
22.	7.72	32.68	86.	5.29	32.77
27.	7.68	32.68	90.	5.25	32.78
30.	7.60	32.68	98.	5.23	32.78
33.	7.58	32.68	110.	5.14	32.80
35.	7.48	32.68	115.	5.03	32.83
37.	7.34	32.68	118.	4.97	32.90
39.	7.22	32.68	119.	4.88	32.93
43.	6.66	32.68	123.	4.83	33.00
47.	6.31	32.68	129.	4.65	33.20
50.	6.22	32.68	131.	4.53	33.23
52.	6.20	32.69	138.	4.45	33.38
53.	6.20	32.69	140.	4.40	33.45
55.	6.17	32.70	143.	4.39	33.51
60.	6.14	32.72	145.	4.37	33.55
65.	6.07	32.74	150.	4.35	33.57

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-101

DATE 14/ 6/70

POSITION 50- 2.0N, 144-59.0W GMT 16.5

RESULTS OF STP CAST 32 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.70	32.68	0	25.52	247.1	0.0	0.0	1479.
10	7.69	32.68	10	25.52	247.4	0.25	0.01	1479.
20	7.68	32.68	20	25.52	247.4	0.49	0.05	1479.
30	7.56	32.68	30	25.54	245.9	0.74	0.11	1479.
50	6.22	32.68	50	25.72	229.1	1.22	0.31	1474.
75	5.63	32.74	75	25.84	218.0	1.78	0.66	1472.
100	5.21	32.78	99	25.92	210.5	2.31	1.14	1471.
125	4.81	33.00	124	26.14	189.9	2.82	1.72	1470.
150	4.28	33.57	149	26.65	141.8	3.22	2.29	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.70	32.68	79.	5.37	32.76
23.	7.68	32.68	81.	5.34	32.76
27.	7.65	32.68	87.	5.33	32.77
29.	7.58	32.68	92.	5.25	32.79
31.	7.54	32.68	100.	5.21	32.78
35.	7.50	32.68	110.	5.13	32.81
36.	7.47	32.68	115.	5.07	32.83
40.	6.82	32.68	120.	4.95	32.90
46.	6.34	32.68	125.	4.81	33.00
50.	6.22	32.68	128.	4.70	33.08
52.	6.16	32.68	132.	4.48	33.26
58.	6.12	32.69	133.	4.43	33.28
62.	5.98	32.70	140.	4.39	33.38
68.	5.83	32.71	143.	4.33	33.43
70.	5.85	32.72	147.	4.29	33.53
75.	5.63	32.74	150.	4.28	33.57

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-102

DATE 15/ 6/70

POSITION 50- 1.0N, 145- 2.0W GMT 4.5

RESULTS OF STP CAST 36 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.48	32.68	0	25.41	258.0	0.0	0.0	1482.
10	7.80	32.68	10	25.51	248.8	0.26	0.01	1479.
20	7.72	32.69	20	25.52	247.4	0.50	0.05	1479.
30	7.45	32.70	30	25.57	243.1	0.75	0.11	1478.
50	6.13	32.73	50	25.77	224.5	1.21	0.30	1473.
75	5.84	32.77	75	25.84	217.8	1.77	0.66	1473.
100	5.21	32.80	99	25.94	208.7	2.30	1.13	1471.
125	4.83	33.03	124	26.16	187.9	2.81	1.71	1470.
150	4.23	33.54	149	26.63	143.6	3.21	2.27	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	8.48	32.68	89.	5.47	32.79
1.	8.50	32.68	92.	5.39	32.80
3.	8.50	32.68	94.	5.38	32.80
5.	8.55	32.68	99.	5.22	32.80
7.	7.97	32.68	106.	5.13	32.82
10.	7.80	32.68	108.	5.13	32.83
23.	7.70	32.69	113.	5.07	32.86
27.	7.62	32.69	120.	4.93	32.94
36.	7.10	32.71	122.	4.93	32.95
40.	6.24	32.71	125.	4.83	33.03
44.	6.16	32.72	128.	4.67	33.12
51.	6.13	32.73	133.	4.53	33.24
61.	6.07	32.72	141.	4.35	33.42
71.	5.37	32.76	143.	4.34	33.46
77.	5.82	32.78	148.	4.25	33.52
80.	5.70	32.78	151.	4.22	33.55
86.	5.57	32.79	152.	4.23	33.56
88.	5.47	32.79	155.	4.20	33.61



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-103

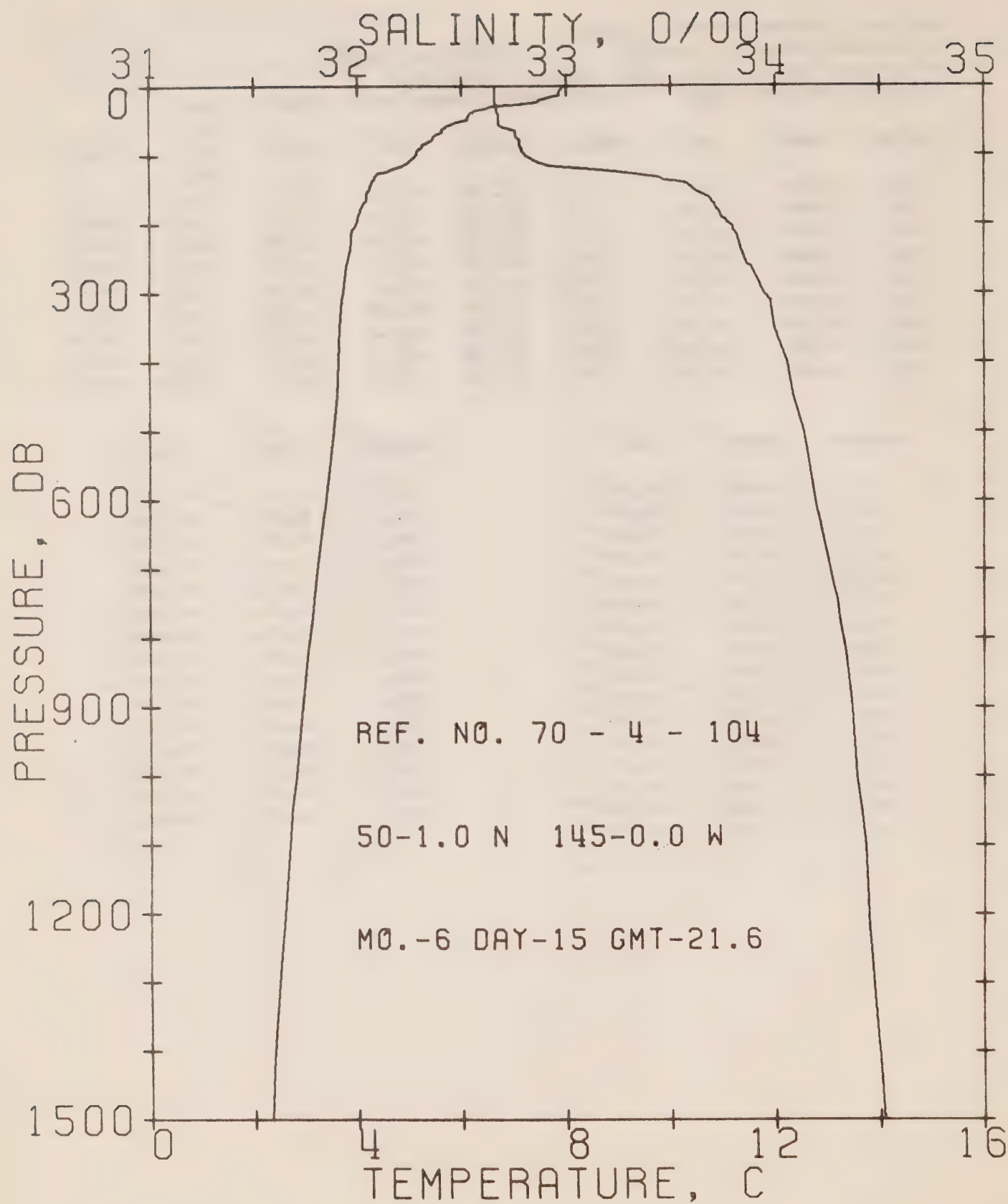
DATE 15/ 6/70

POSITION 50- 0.0N, 145- 4.0W GMT 16.5

RESULTS OF STP CAST 31 POINTS TAKEN FROM ANALOG TRACE

FRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.08	32.67	0	25.46	253.1	0.0	0.0	1480.
10	7.99	32.67	10	25.47	252.2	0.25	0.01	1480.
20	7.79	32.68	20	25.50	249.2	0.50	0.05	1479.
30	7.62	32.68	30	25.53	246.7	0.75	0.11	1479.
50	6.67	32.69	50	25.67	233.7	1.24	0.31	1476.
75	5.64	32.76	75	25.85	216.6	1.80	0.67	1472.
100	5.13	32.82	99	25.96	206.6	2.33	1.14	1470.
125	4.72	33.07	124	26.20	183.7	2.82	1.70	1469.
150	4.27	33.59	149	26.66	140.2	3.21	2.25	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	8.08	32.67	84.	5.34	32.78
7.	8.08	32.67	86.	5.30	32.78
9.	8.06	32.67	90.	5.28	32.79
12.	7.85	32.67	93.	5.24	32.80
27.	7.74	32.68	100.	5.13	32.82
31.	7.58	32.68	106.	5.11	32.83
35.	7.55	32.68	112.	5.01	32.91
39.	7.47	32.68	117.	4.86	32.98
42.	7.34	32.68	120.	4.82	33.02
45.	7.28	32.69	126.	4.70	33.08
49.	6.72	32.69	133.	4.45	33.35
53.	6.53	32.70	135.	4.47	33.38
58.	6.22	32.71	139.	4.32	33.50
67.	6.09	32.74	147.	4.29	33.57
79.	5.42	32.77	153.	4.25	33.61
81.	5.36	32.77			



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-104

DATE 15/ 6/70

POSITION 50- 1.0N. 145- 0.0W GMT 21.6

RESULTS OF STP CAST 87 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.93	32.66	0	25.47	251.7	0.0	0.0	1480.
10	7.88	32.66	10	25.48	251.5	0.25	0.01	1480.
20	7.50	32.66	20	25.53	246.4	0.50	0.05	1478.
30	6.56	32.67	30	25.67	233.8	0.74	0.11	1475.
50	6.07	32.68	50	25.74	227.3	1.20	0.30	1473.
75	5.47	32.77	75	25.88	213.9	1.75	0.65	1471.
100	5.15	32.81	99	25.95	207.6	2.28	1.12	1470.
125	4.49	33.28	124	26.40	165.2	2.76	1.67	1469.
150	4.24	33.62	149	26.69	138.0	3.13	2.18	1468.
175	4.11	33.72	174	26.78	129.2	3.46	2.73	1468.
200	3.99	33.78	199	26.85	123.1	3.78	3.34	1468.
225	3.90	33.83	223	26.89	119.1	4.08	3.99	1469.
250	3.84	33.86	248	26.92	116.6	4.37	4.70	1469.
300	3.74	33.95	298	27.00	109.0	4.94	6.28	1469.
400	3.65	34.06	397	27.10	100.6	5.98	10.00	1471.
500	3.56	34.14	496	27.17	94.5	6.96	14.49	1472.
600	3.41	34.19	595	27.23	89.7	7.88	19.64	1473.
800	3.09	34.33	793	27.37	77.7	9.55	31.49	1475.
1000	2.83	34.39	990	27.44	71.5	11.03	45.05	1477.
1200	2.61	34.45	1188	27.50	66.0	12.40	60.32	1480.
1500	2.32	34.52	1483	27.59	59.0	14.26	85.98	1484.

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-106

DATE 16/ 6/70

POSITION 50- 0.0N, 145- 0.0W GMT 4.5

RESULTS OF STP CAST 28 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.79	32.67	0	25.50	249.1	0.0	0.0	1479.
10	7.79	32.67	10	25.50	249.4	0.25	0.01	1479.
20	7.79	32.67	20	25.50	249.6	0.50	0.05	1479.
30	7.65	32.67	30	25.52	247.9	0.75	0.11	1479.
50	6.73	32.70	50	25.67	234.1	1.23	0.31	1476.
75	6.02	32.75	75	25.80	222.0	1.80	0.67	1473.
100	5.25	32.78	99	25.91	210.9	2.34	1.15	1471.
125	4.79	33.04	124	26.17	186.4	2.85	1.73	1470.
150	4.27	33.58	149	26.65	141.1	3.24	2.28	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.79	32.67	87.	5.42	32.76
26.	7.79	32.67	96.	5.27	32.78
33.	7.55	32.67	100.	5.25	32.78
37.	7.50	32.67	102.	5.20	32.78
40.	7.41	32.68	111.	5.10	32.82
46.	6.90	32.69	116.	5.09	32.84
52.	6.64	32.70	123.	4.91	32.95
56.	6.37	32.71	129.	4.54	33.23
60.	6.15	32.72	132.	4.53	33.30
64.	6.14	32.74	138.	4.37	33.41
72.	6.07	32.74	144.	4.29	33.51
77.	5.98	32.75	148.	4.29	33.55
79.	5.98	32.75	153.	4.23	33.62
83.	5.78	32.76	157.	4.22	33.63



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-107

DATE 16/ 6/70

POSITION 50- 2.0N, 145- 4.0W GMT 6.1

RESULTS OF STP CAST 28 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.87	32.66	0	25.48	250.9	0.0	0.0	1479.
10	7.37	32.66	10	25.48	251.3	0.25	0.01	1480.
20	7.37	32.66	20	25.48	251.4	0.50	0.05	1480.
30	7.78	32.68	30	25.51	249.2	0.75	0.12	1480.
50	6.64	32.70	50	25.68	233.1	1.24	0.31	1475.
75	5.99	32.76	75	25.81	220.7	1.80	0.67	1473.
100	5.24	32.80	99	25.93	209.6	2.34	1.15	1471.
125	5.03	32.86	124	26.00	202.9	2.86	1.74	1470.
150	4.37	33.42	149	26.52	154.0	3.30	2.35	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.87	32.66	88.	5.43	32.78
22.	7.87	32.66	90.	5.42	32.78
26.	7.86	32.67	95.	5.28	32.79
33.	7.72	32.68	97.	5.27	32.79
40.	7.44	32.68	102.	5.22	32.80
43.	7.08	32.68	111.	5.18	32.81
46.	6.98	32.69	112.	5.15	32.81
53.	6.39	32.70	121.	5.10	32.84
57.	6.21	32.70	124.	5.04	32.85
62.	6.19	32.71	126.	5.03	32.87
67.	6.04	32.72	138.	4.60	33.23
74.	6.05	32.76	147.	4.45	33.37
79.	5.76	32.76	150.	4.37	33.42
80.	5.75	32.76	152.	4.34	33.49

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-108

DATE 16/ 6/70

POSITION 50- 4.0N, 144-59.0W GMT 9.6

RESULTS OF STD CAST 26 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.73	32.66	0	25.50	249.0	0.0	0.0	1479.
10	7.73	32.66	10	25.50	249.3	0.25	0.01	1479.
20	7.73	32.66	20	25.50	249.5	0.50	0.05	1479.
30	7.63	32.67	30	25.52	247.8	0.75	0.11	1479.
50	6.27	32.68	50	25.72	229.4	1.22	0.31	1474.
75	5.41	32.76	75	25.88	214.0	1.78	0.66	1471.
100	5.19	32.79	99	25.93	209.7	2.31	1.13	1470.
125	4.61	33.14	124	26.27	177.0	2.80	1.70	1469.
150	4.29	33.57	149	26.64	141.9	3.20	2.25	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.73	32.66	87.	5.32	32.77
20.	7.73	32.66	93.	5.23	32.78
27.	7.71	32.66	101.	5.19	32.79
32.	7.57	32.67	103.	5.20	32.80
37.	7.20	32.67	105.	5.18	32.80
43.	6.72	32.68	108.	5.03	32.84
47.	6.38	32.68	120.	4.83	33.00
53.	6.17	32.69	122.	4.66	33.09
60.	6.09	32.70	131.	4.50	33.25
66.	5.77	32.74	136.	4.39	33.40
68.	5.72	32.74	143.	4.34	33.48
71.	5.50	32.75	150.	4.29	33.57
78.	5.35	32.77	154.	4.28	33.58

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-109

DATE 16/ 6/70

POSITION 49-59.0N, 145- 2.0W GMT 12.2

RESULTS OF STP CAST 26 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.73	32.66	0	25.50	249.0	0.0	0.0	1479.
10	7.73	32.66	10	25.50	249.3	0.25	0.01	1479.
20	7.73	32.66	20	25.50	249.5	0.50	0.05	1479.
30	7.69	32.67	30	25.51	248.7	0.75	0.11	1479.
50	6.56	32.69	50	25.68	232.8	1.23	0.31	1475.
75	5.82	32.73	75	25.81	220.5	1.79	0.67	1473.
100	5.27	32.79	99	25.92	210.5	2.33	1.15	1471.
125	4.78	33.07	124	26.19	184.6	2.84	1.73	1470.
150	4.24	33.62	149	26.69	137.6	3.23	2.27	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.73	32.66	85.	5.62	32.76
25.	7.73	32.66	88.	5.36	32.77
27.	7.70	32.66	92.	5.38	32.78
32.	7.69	32.67	97.	5.35	32.79
35.	7.59	32.67	102.	5.22	32.79
40.	7.16	32.67	105.	5.21	32.79
52.	6.44	32.69	115.	5.01	32.83
57.	6.16	32.70	117.	5.00	32.85
60.	6.13	32.70	127.	4.72	33.12
64.	6.01	32.73	132.	4.48	33.32
69.	6.05	32.74	140.	4.31	33.50
74.	5.85	32.73	144.	4.30	33.54
80.	5.67	32.76	150.	4.24	33.62

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-110

DATE 16/ 6/70

POSITION 49-58.0N, 145- 4.0W GMT 15.1

RESULTS OF STP CAST 31 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.70	32.67	0	25.51	247.9	0.0	0.0	1479.
10	7.68	32.67	10	25.52	248.0	0.25	0.01	1479.
20	7.66	32.67	20	25.52	247.9	0.50	0.05	1479.
30	7.66	32.68	30	25.52	247.5	0.74	0.11	1479.
50	6.19	32.69	50	25.73	228.1	1.22	0.31	1474.
75	5.64	32.76	75	25.85	216.4	1.78	0.66	1472.
100	5.30	32.80	99	25.93	209.7	2.31	1.14	1471.
125	4.83	33.05	124	26.18	186.2	2.82	1.72	1470.
150	4.27	33.62	149	26.69	138.0	3.20	2.25	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.70	32.67	98.	5.33	32.80
27.	7.65	32.67	103.	5.25	32.81
31.	7.67	32.68	105.	5.18	32.81
33.	7.67	32.68	110.	5.14	32.82
39.	7.15	32.69	112.	5.11	32.83
47.	6.30	32.69	116.	5.09	32.84
51.	6.16	32.69	124.	4.87	33.02
57.	6.11	32.70	128.	4.71	33.15
58.	6.05	32.70	130.	4.55	33.31
61.	6.00	32.70	134.	4.38	33.43
62.	5.93	32.72	139.	4.33	33.51
73.	5.63	32.75	142.	4.28	33.53
78.	5.66	32.78	146.	4.29	33.58
84.	5.53	32.78	150.	4.27	33.62
86.	5.52	32.78	155.	4.21	33.64
95.	5.41	32.80			



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-111

DATE 16/ 6/70

POSITION 50- 1.0N. 144-59.0W GMT 17.7

RESULTS OF STP CAST 27 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.68	32.66	0	25.51	248.3	0.0	0.0	1479.
10	7.67	32.66	10	25.51	248.5	0.25	0.01	1479.
20	7.66	32.66	20	25.51	248.5	0.50	0.05	1479.
30	7.64	32.66	30	25.51	248.5	0.75	0.11	1479.
50	6.36	32.68	50	25.71	230.4	1.23	0.31	1474.
75	5.35	32.77	75	25.90	212.5	1.78	0.66	1471.
100	5.05	32.83	99	25.98	204.7	2.30	1.13	1470.
125	4.52	33.35	124	26.45	160.6	2.76	1.65	1469.
150	4.32	33.57	149	26.64	142.7	3.14	2.18	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.68	32.66	97.	5.09	32.82
33.	7.64	32.66	101.	5.04	32.84
37.	7.54	32.66	107.	4.90	32.92
42.	6.75	32.67	110.	4.74	33.04
53.	6.21	32.69	113.	4.72	33.07
57.	6.18	32.70	115.	4.65	33.10
62.	5.99	32.74	122.	4.52	33.29
68.	5.49	32.76	124.	4.53	33.34
74.	5.36	32.77	133.	4.47	33.43
82.	5.30	32.78	135.	4.43	33.46
83.	5.24	32.78	142.	4.37	33.50
87.	5.23	32.79	145.	4.32	33.54
88.	5.22	32.79	150.	4.32	33.57
91.	5.18	32.79			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-112

DATE 16/ 6/70

POSITION 50- 1.0N, 144-51.0W GMT 21.0

RESULTS OF STP CAST 33 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.70	32.64	0	25.49	250.1	0.0	0.0	1479.
10	7.70	32.64	10	25.49	250.4	0.25	0.01	1479.
20	7.69	32.64	20	25.49	250.6	0.50	0.05	1479.
30	7.66	32.64	30	25.50	250.2	0.75	0.11	1479.
50	6.36	32.68	50	25.70	230.8	1.24	0.31	1474.
75	5.44	32.74	75	25.86	215.5	1.80	0.67	1471.
100	5.17	32.80	99	25.94	208.9	2.33	1.14	1470.
125	4.51	33.21	124	26.34	171.0	2.81	1.69	1469.
150	4.33	33.65	149	26.70	136.3	3.19	2.22	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.70	32.64	96.	5.22	32.79
18.	7.70	32.64	103.	5.13	32.80
26.	7.68	32.64	109.	4.93	32.89
31.	7.65	32.64	112.	4.87	32.96
38.	7.58	32.64	114.	4.78	33.00
46.	6.55	32.67	115.	4.77	33.01
48.	6.40	32.68	119.	4.62	33.12
50.	6.36	32.68	123.	4.58	33.18
55.	6.12	32.68	125.	4.51	33.21
61.	6.10	32.68	128.	4.51	33.23
63.	6.00	32.71	134.	4.39	33.38
66.	5.82	32.72	139.	4.38	33.49
70.	5.69	32.73	143.	4.30	33.58
77.	5.34	32.75	145.	4.33	33.62
79.	5.34	32.76	148.	4.34	33.64
86.	5.28	32.77	150.	4.33	33.65
92.	5.25	32.78			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-113

DATE 17/ 6/70

POSITION 50- 4.0N. 144-51.0W GMT 0.1

RESULTS OF STP CAST 31 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.83	32.64	0	25.47	251.9	0.0	0.0	1479.
10	7.82	32.64	10	25.47	252.1	0.25	0.01	1479.
20	7.81	32.64	20	25.47	252.1	0.50	0.05	1479.
30	7.80	32.64	30	25.48	252.2	0.76	0.12	1480.
50	6.88	32.66	50	25.62	238.4	1.26	0.32	1476.
75	5.83	32.73	75	25.81	221.0	1.83	0.68	1473.
100	5.25	32.79	99	25.92	210.2	2.36	1.16	1471.
125	4.63	33.15	124	26.28	176.5	2.85	1.72	1469.
150	4.33	33.56	149	26.63	143.1	3.24	2.27	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.83	32.64	89.	5.33	32.77
33.	7.80	32.64	99.	5.29	32.79
37.	7.81	32.64	100.	5.25	32.79
39.	7.78	32.64	102.	5.25	32.79
42.	7.72	32.65	108.	5.12	32.83
43.	7.73	32.65	111.	4.99	32.87
48.	7.40	32.66	114.	4.95	32.94
52.	6.37	32.67	116.	4.84	33.00
56.	6.20	32.68	119.	4.77	33.04
61.	6.18	32.68	123.	4.69	33.10
66.	6.13	32.71	131.	4.45	33.31
70.	6.07	32.71	138.	4.43	33.39
75.	5.83	32.73	141.	4.40	33.44
76.	5.72	32.73	144.	4.33	33.52
82.	5.45	32.76	150.	4.33	33.56
88.	5.38	32.77			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-114

DATE 17/ 6/70

POSITION 50- 4.0N, 144-51.0W GMT 0.3

RESULTS OF STP CAST 27 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.82	32.64	0	25.47	251.7	0.0	0.0	1479.
10	7.82	32.64	10	25.47	252.1	0.25	0.01	1479.
20	7.78	32.64	20	25.48	251.7	0.50	0.05	1479.
30	7.75	32.64	30	25.48	251.4	0.76	0.12	1479.
50	6.47	32.67	50	25.68	233.1	1.25	0.32	1475.
75	5.76	32.73	75	25.82	220.0	1.82	0.68	1472.
100	5.19	32.79	99	25.93	209.2	2.35	1.15	1470.
125	4.69	33.06	124	26.20	184.0	2.85	1.72	1469.
150	4.41	33.49	149	26.57	149.1	3.26	2.29	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.82	32.64	101.	5.17	32.80
16.	7.82	32.64	104.	5.16	32.81
19.	7.78	32.64	108.	5.03	32.85
36.	7.74	32.64	111.	5.00	32.86
39.	7.70	32.64	113.	4.96	32.89
48.	6.60	32.66	115.	4.97	32.89
51.	6.40	32.67	118.	4.85	32.98
54.	6.21	32.68	124.	4.73	33.04
60.	6.19	32.69	127.	4.62	33.11
69.	6.12	32.70	130.	4.59	33.15
74.	5.85	32.73	136.	4.47	33.31
77.	5.58	32.74	145.	4.44	33.41
82.	5.39	32.76	150.	4.41	33.49
97.	5.24	32.78			



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-115

DATE 17/ 6/70

POSITION 50- 4.0N, 144-51.0W GMT 0.4

RESULTS OF STP CAST 27 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.82	32.64	0	25.47	251.7	0.0	0.0	1479.
10	7.81	32.64	10	25.47	251.9	0.25	0.01	1479.
20	7.79	32.64	20	25.48	251.9	0.50	0.05	1479.
30	7.78	32.64	30	25.48	251.9	0.76	0.12	1479.
50	6.51	32.68	50	25.68	232.9	1.25	0.32	1475.
75	5.73	32.73	75	25.82	219.6	1.82	0.68	1472.
100	5.10	32.83	99	25.97	205.2	2.35	1.15	1470.
125	4.69	33.09	124	26.22	181.7	2.84	1.71	1469.
150	4.31	33.50	149	26.59	147.1	3.24	2.27	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.82	32.64	101.	5.07	32.84
32.	7.78	32.64	105.	5.03	32.86
40.	7.74	32.64	107.	4.97	32.87
43.	7.50	32.65	113.	4.92	32.92
46.	6.75	32.66	117.	4.83	32.96
51.	6.45	32.68	121.	4.83	32.99
55.	6.21	32.69	128.	4.59	33.17
62.	6.19	32.70	134.	4.49	33.30
68.	6.13	32.71	140.	4.44	33.40
80.	5.45	32.75	142.	4.40	33.42
85.	5.35	32.77	146.	4.39	33.45
89.	5.32	32.78	148.	4.31	33.49
91.	5.32	32.78	151.	4.31	33.51
95.	5.27	32.81			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-116

DATE 17/ 6/70

POSITION 50- 4.0N, 144-51.0W GMT 0.6

RESULTS OF STP CAST 29 POINTS TAKEN FROM ANALOG TRACE

DEPTH	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.82	32.64	0	25.47	251.7	0.0	0.0	1479.
10	7.81	32.64	10	25.47	252.0	0.25	0.01	1479.
20	7.81	32.64	20	25.47	252.0	0.50	0.05	1479.
30	7.76	32.64	30	25.48	251.5	0.76	0.12	1479.
50	6.40	32.67	50	25.69	231.8	1.25	0.32	1474.
75	5.69	32.74	75	25.83	218.8	1.81	0.68	1472.
100	5.27	32.79	99	25.92	210.5	2.35	1.15	1471.
125	4.70	33.07	124	26.21	183.2	2.84	1.72	1469.
150	4.30	33.53	149	26.61	145.0	3.24	2.28	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.82	32.64	104.	5.15	32.81
28.	7.80	32.64	107.	5.03	32.85
30.	7.76	32.64	111.	4.98	32.89
40.	7.76	32.65	114.	4.88	32.93
42.	7.74	32.65	123.	4.78	33.03
49.	6.45	32.67	127.	4.62	33.12
54.	6.21	32.69	130.	4.60	33.15
62.	6.17	32.71	135.	4.48	33.30
65.	6.14	32.71	137.	4.47	33.35
68.	6.07	32.72	142.	4.33	33.46
79.	5.48	32.75	145.	4.32	33.49
83.	5.40	32.76	146.	4.33	33.50
92.	5.33	32.78	149.	4.30	33.53
93.	5.33	32.78	150.	4.30	33.53
100.	5.27	32.79			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-117

DATE 17/ 6/70

POSITION 50- 4.0N, 144-51.0W GMT 0.7

RESULTS OF STP CAST 26 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.82	32.64	0	25.47	251.7	0.0	0.0	1479.
10	7.81	32.64	10	25.47	252.0	0.25	0.01	1479.
20	7.80	32.64	20	25.48	251.9	0.50	0.05	1479.
30	7.79	32.64	30	25.48	251.9	0.76	0.12	1480.
50	6.37	32.67	50	25.69	231.8	1.25	0.32	1474.
75	5.67	32.73	75	25.83	219.0	1.82	0.68	1472.
100	5.22	32.79	99	25.93	209.7	2.35	1.15	1471.
125	4.65	33.09	124	26.22	181.8	2.84	1.71	1469.
150	4.29	33.55	149	26.63	143.4	3.24	2.27	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.82	32.64	99.	5.26	32.78
37.	7.78	32.64	104.	5.07	32.84
42.	7.72	32.65	110.	4.98	32.89
48.	6.50	32.66	112.	4.88	32.94
51.	6.30	32.67	120.	4.78	33.00
63.	6.15	32.70	127.	4.60	33.12
67.	6.04	32.71	129.	4.59	33.16
69.	5.95	32.71	134.	4.47	33.32
70.	5.94	32.71	135.	4.43	33.37
79.	5.45	32.75	139.	4.33	33.43
86.	5.36	32.76	143.	4.34	33.50
91.	5.33	32.77	147.	4.30	33.53
93.	5.33	32.77	150.	4.29	33.55

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-118

DATE 17/ 6/70

POSITION 50- 5.0N, 144-54.0W GMT 3.0

RESULTS OF STP CAST 29 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.82	32.63	0	25.46	252.5	0.0	0.0	1479.
10	7.81	32.63	10	25.47	252.5	0.25	0.01	1479.
20	7.80	32.64	20	25.47	252.3	0.50	0.05	1479.
30	7.79	32.64	30	25.48	252.1	0.76	0.12	1480.
50	6.31	32.70	50	25.72	229.0	1.24	0.31	1474.
75	5.74	32.73	75	25.82	220.1	1.81	0.67	1472.
100	5.18	32.79	99	25.93	209.5	2.34	1.15	1470.
125	4.41	33.30	124	26.42	163.5	2.82	1.69	1468.
150	4.21	33.63	149	26.70	136.6	3.18	2.20	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.82	32.63	110.	4.79	32.95
36.	7.78	32.64	113.	4.75	32.99
39.	7.61	32.65	114.	4.68	33.01
40.	7.60	32.65	118.	4.59	33.12
43.	6.90	32.67	120.	4.56	33.15
51.	6.23	32.70	124.	4.42	33.28
55.	6.20	32.69	128.	4.40	33.35
58.	6.19	32.69	132.	4.43	33.50
61.	6.10	32.68	136.	4.40	33.53
67.	6.03	32.71	140.	4.34	33.56
84.	5.41	32.75	141.	4.34	33.58
90.	5.34	32.77	146.	4.23	33.60
96.	5.23	32.78	150.	4.21	33.63
100.	5.18	32.79	152.	4.19	33.65
103.	5.02	32.82			



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-119

DATE 17/ 6/70

POSITION 50- 0.0N, 145- 1.0W GMT 5.7

RESULTS OF STD CAST 26 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.80	32.64	0	25.48	251.4	0.0	0.0	1479.
10	7.80	32.64	10	25.48	251.5	0.25	0.01	1479.
20	7.80	32.65	20	25.48	251.5	0.50	0.05	1479.
30	7.80	32.65	30	25.48	251.3	0.75	0.12	1480.
50	6.56	32.67	50	25.67	233.8	1.25	0.31	1475.
75	5.60	32.73	75	25.83	218.4	1.81	0.67	1472.
100	5.22	32.78	99	25.92	210.6	2.34	1.15	1471.
125	4.64	33.08	124	26.22	182.4	2.84	1.72	1469.
150	4.33	33.51	149	26.59	146.9	3.25	2.29	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.80	32.64	83.	5.39	32.76
29.	7.80	32.65	93.	5.28	32.78
38.	7.77	32.66	100.	5.22	32.78
39.	7.70	32.66	111.	5.00	32.86
41.	7.66	32.66	114.	4.88	32.91
46.	6.79	32.67	123.	4.66	33.05
56.	6.22	32.68	130.	4.58	33.14
62.	6.10	32.70	133.	4.59	33.21
65.	5.97	32.70	136.	4.46	33.33
68.	5.94	32.71	141.	4.43	33.39
73.	5.79	32.72	143.	4.38	33.41
75.	5.60	32.73	150.	4.33	33.51
78.	5.56	32.74	155.	4.26	33.56

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-120

DATE 17/ 6/70

POSITION 49-58.0N, 145- 0.0W GMT 9.0

RESULTS OF STP CAST 34 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.68	32.64	0	25.49	249.8	0.0	0.0	1479.
10	7.68	32.64	10	25.50	250.0	0.25	0.01	1479.
20	7.67	32.65	20	25.50	249.9	0.50	0.05	1479.
30	7.67	32.65	30	25.50	249.8	0.75	0.11	1479.
50	6.58	32.66	50	25.66	235.0	1.24	0.32	1475.
75	5.43	32.74	75	25.86	215.6	1.80	0.67	1471.
100	5.05	32.83	99	25.98	205.0	2.33	1.14	1470.
125	4.39	33.41	124	26.51	154.6	2.78	1.66	1468.
150	4.25	33.63	149	26.70	137.0	3.14	2.16	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.68	32.64	87.	5.31	32.77
37.	7.67	32.65	90.	5.27	32.78
42.	7.65	32.65	95.	5.19	32.79
43.	7.62	32.65	96.	5.15	32.80
45.	7.25	32.65	98.	5.14	32.81
47.	6.85	32.66	100.	5.05	32.83
50.	6.58	32.66	105.	4.93	32.90
52.	6.46	32.67	110.	4.72	33.02
54.	6.35	32.68	114.	4.67	33.11
55.	6.28	32.69	117.	4.55	33.21
57.	6.21	32.69	120.	4.45	33.29
59.	6.02	32.70	124.	4.40	33.40
65.	5.82	32.72	128.	4.38	33.45
72.	5.62	32.73	130.	4.35	33.48
74.	5.47	32.74	133.	4.34	33.52
78.	5.33	32.75	137.	4.30	33.57
83.	5.32	32.77	150.	4.25	33.63

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-121

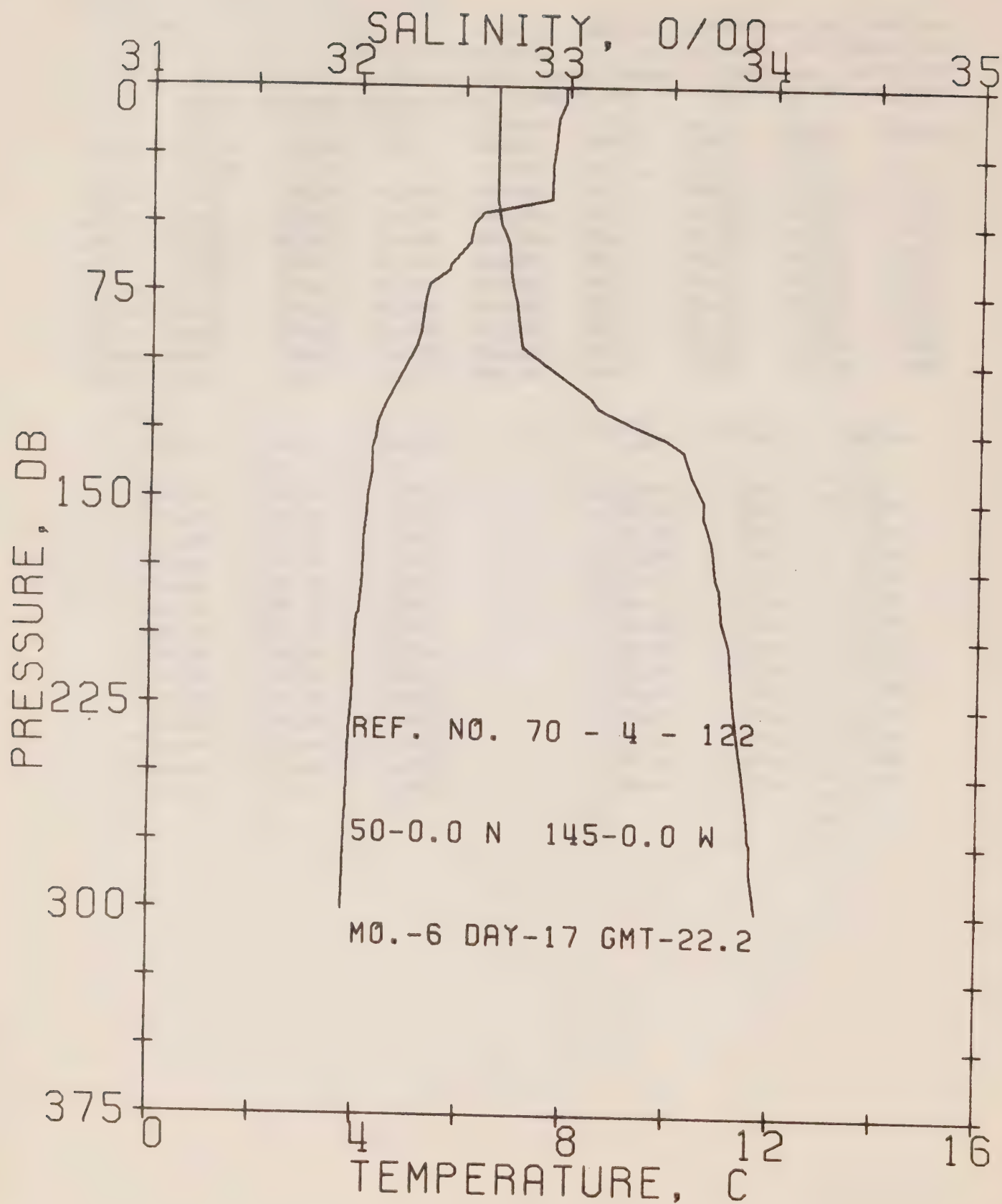
DATE 17/ 6/70

POSITION 49-59.0N. 145- 1.0W GMT 16.4

RESULTS OF STP CAST 28 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.65	32.65	0	25.50	248.7	0.0	0.0	1479.
10	7.65	32.65	10	25.50	249.1	0.25	0.01	1479.
20	7.65	32.65	20	25.50	249.2	0.50	0.05	1479.
30	7.65	32.65	30	25.50	249.4	0.75	0.11	1479.
50	6.45	32.67	50	25.68	232.7	1.23	0.31	1475.
75	5.50	32.75	75	25.86	215.5	1.79	0.67	1471.
100	5.20	32.80	99	25.94	208.9	2.32	1.14	1471.
125	4.51	33.23	124	26.35	169.5	2.80	1.69	1469.
150	4.27	33.59	149	26.66	140.2	3.19	2.23	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.65	32.65	77.	5.40	32.76
35.	7.65	32.65	80.	5.37	32.76
38.	7.55	32.65	82.	5.34	32.77
40.	7.41	32.65	85.	5.34	32.77
42.	7.05	32.65	90.	5.30	32.78
43.	6.82	32.66	93.	5.29	32.79
50.	6.45	32.67	100.	5.20	32.80
52.	6.40	32.68	112.	4.90	32.92
55.	6.27	32.69	115.	4.75	33.00
57.	6.20	32.69	125.	4.51	33.23
62.	6.04	32.71	135.	4.45	33.38
64.	5.83	32.71	138.	4.44	33.42
68.	5.66	32.72	140.	4.40	33.47
74.	5.55	32.75	150.	4.27	33.59





PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-122

DATE 17/ 6/70

POSITION 50- 0.0N, 145- 0.0W GMT 22.2

RESULTS OF STP CAST 43 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.94	32.66	0	25.47	251.9	0.0	0.0	1480.
10	7.85	32.66	10	25.48	251.0	0.25	0.01	1479.
20	7.77	32.66	20	25.50	250.0	0.50	0.05	1479.
30	7.71	32.66	30	25.50	249.4	0.75	0.11	1479.
50	6.21	32.68	50	25.72	229.0	1.24	0.31	1474.
75	5.32	32.75	75	25.88	213.8	1.79	0.66	1471.
100	4.98	32.88	99	26.03	200.4	2.32	1.13	1470.
125	4.37	33.39	124	26.50	155.7	2.77	1.64	1468.
150	4.20	33.67	149	26.73	133.5	3.12	2.14	1468.
175	4.13	33.73	174	26.79	128.8	3.45	2.68	1469.
200	3.99	33.79	199	26.85	123.0	3.76	3.28	1468.
225	3.92	33.82	223	26.88	119.8	4.06	3.94	1469.
250	3.86	33.87	248	26.93	115.9	4.36	4.65	1469.
300	3.76	33.94	298	26.99	110.0	4.92	6.23	1469.

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-123

DATE 18/ 6/70

POSITION 50- 4.0N, 144-59.0W GMT 4.5

RESULTS OF STD CAST 35 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.25	32.64	0	25.41	257.7	0.0	0.0	1481.
10	7.95	32.64	10	25.45	253.9	0.26	0.01	1480.
20	7.79	32.64	20	25.48	251.8	0.51	0.05	1479.
30	7.77	32.65	30	25.49	251.2	0.76	0.12	1479.
50	6.31	32.67	50	25.70	230.9	1.25	0.31	1474.
75	5.65	32.74	75	25.84	218.2	1.82	0.67	1472.
100	5.20	32.79	99	25.93	209.8	2.35	1.15	1471.
125	4.53	33.21	124	26.33	171.2	2.83	1.70	1469.
150	4.20	33.63	149	26.70	136.5	3.21	2.23	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	8.25	32.64	72.	5.80	32.71
5.	8.27	32.64	75.	5.65	32.74
8.	8.15	32.64	77.	5.48	32.75
10.	7.95	32.64	85.	5.34	32.76
12.	7.87	32.64	88.	5.32	32.77
15.	7.82	32.64	90.	5.28	32.78
20.	7.79	32.64	95.	5.27	32.78
35.	7.76	32.65	102.	5.17	32.79
39.	7.74	32.65	105.	5.06	32.82
42.	7.60	32.65	110.	4.91	32.89
43.	7.20	32.65	116.	4.72	33.01
45.	6.72	32.66	120.	4.68	33.07
47.	6.46	32.66	125.	4.53	33.21
50.	6.31	32.67	127.	4.50	33.27
52.	6.17	32.68	130.	4.39	33.37
55.	6.16	32.68	140.	4.30	33.51
56.	6.14	32.68	150.	4.20	33.63
63.	6.11	32.70			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-124

DATE 18/ 6/70

POSITION 50- 1.0N, 145- 5.0W GMT 16.3

RESULTS OF STP CAST 26 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.00	32.65	0	25.45	253.4	0.0	0.0	1480.
10	7.98	32.65	10	25.46	253.5	0.25	0.01	1480.
20	7.75	32.65	20	25.49	250.5	0.51	0.05	1479.
30	7.73	32.65	30	25.49	250.4	0.76	0.12	1479.
50	6.56	32.68	50	25.67	233.6	1.25	0.32	1475.
75	5.77	32.73	75	25.82	220.1	1.82	0.68	1472.
100	5.23	32.78	99	25.92	210.7	2.35	1.15	1471.
125	4.63	33.14	124	26.27	177.4	2.85	1.73	1469.
150	4.26	33.56	149	26.64	142.3	3.25	2.27	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	8.00	32.65	92.	5.31	32.77
8.	8.00	32.65	100.	5.23	32.78
14.	7.94	32.65	108.	5.09	32.81
19.	7.75	32.65	115.	5.00	32.86
38.	7.71	32.65	120.	4.85	32.97
41.	7.68	32.65	123.	4.71	33.06
44.	7.55	32.66	129.	4.46	33.30
48.	6.79	32.67	132.	4.47	33.36
51.	6.45	32.68	137.	4.40	33.37
57.	6.15	32.68	139.	4.42	33.39
68.	6.09	32.71	144.	4.32	33.48
71.	6.02	32.72	150.	4.26	33.56
80.	5.45	32.75	152.	4.25	33.57

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-125

DATE 19/ 6/70

POSITION 50- 0.0N, 144-58.0W

GMT 4.5

RESULTS OF STD CAST

35 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.19	32.65	0	25.43	256.0	0.0	0.0	1481.
10	8.15	32.65	10	25.43	256.0	0.26	0.01	1481.
20	7.74	32.65	20	25.49	250.4	0.51	0.05	1479.
30	7.70	32.65	30	25.50	250.1	0.76	0.12	1479.
50	6.18	32.68	50	25.72	228.6	1.24	0.31	1474.
75	5.49	32.74	75	25.86	216.3	1.80	0.66	1471.
100	5.11	32.82	99	25.96	206.5	2.33	1.14	1470.
125	4.46	33.26	124	26.38	166.7	2.81	1.69	1468.
150	4.24	33.62	149	26.69	137.6	3.18	2.20	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	8.19	32.65	106.	5.00	32.86
11.	8.15	32.65	109.	4.96	32.91
15.	7.79	32.65	111.	4.77	33.18
20.	7.74	32.65	112.	4.88	32.94
37.	7.68	32.65	118.	4.77	32.98
47.	6.25	32.67	120.	4.59	33.01
50.	6.18	32.68	126.	4.43	33.31
52.	6.10	32.69	128.	4.42	33.33
54.	6.08	32.70	132.	4.39	33.44
60.	5.93	32.71	134.	4.39	33.47
70.	5.68	32.73	136.	4.38	33.50
79.	5.34	32.75	138.	4.38	33.52
87.	5.29	32.77	140.	4.32	33.57
92.	5.28	32.77	143.	4.34	33.59
94.	5.25	32.78	147.	4.27	33.60
97.	5.23	32.79	150.	4.24	33.62
100.	5.11	32.82	155.	4.20	33.66
105.	5.03	32.85			



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-126

DATE 19/ 6/70

POSITION 49-58.0N, 144-56.0W GMT 16.5

RESULTS OF STP CAST 35 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.24	32.64	0	25.41	257.5	0.0	0.0	1481.
10	8.20	32.64	10	25.42	257.3	0.26	0.01	1481.
20	7.77	32.65	20	25.49	250.8	0.51	0.05	1479.
30	7.72	32.65	30	25.50	250.0	0.76	0.12	1479.
50	6.45	32.71	50	25.71	229.7	1.25	0.31	1475.
75	5.81	32.79	75	25.85	216.6	1.80	0.67	1473.
100	5.09	32.84	99	25.98	204.5	2.33	1.13	1470.
125	4.49	33.32	124	26.43	162.5	2.80	1.67	1469.
150	4.32	33.64	149	26.70	137.0	3.17	2.19	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	8.24	32.64	94.	5.23	32.81
8.	8.24	32.64	103.	5.02	32.86
10.	8.20	32.64	108.	4.82	32.97
14.	7.82	32.65	115.	4.78	33.01
25.	7.73	32.65	117.	4.71	33.07
42.	7.69	32.66	121.	4.67	33.13
50.	6.45	32.71	125.	4.49	33.32
53.	6.18	32.75	128.	4.47	33.36
58.	6.01	32.76	130.	4.41	33.39
61.	6.00	32.75	137.	4.37	33.50
62.	5.97	32.77	139.	4.32	33.53
65.	5.96	32.77	140.	4.32	33.54
72.	5.83	32.78	143.	4.26	33.58
76.	5.81	32.79	146.	4.32	33.61
83.	5.33	32.79	148.	4.31	33.63
85.	5.38	32.80	150.	4.32	33.64
88.	5.31	32.80	154.	4.27	33.66
90.	5.31	32.80			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-127

DATE 20/ 6/70

POSITION 50- 1.0N, 144-59.0W GMT 4.5

RESULTS OF STP CAST 33 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.30	32.61	0	25.38	260.6	0.0	0.0	1481.
10	8.00	32.62	10	25.43	255.8	0.26	0.01	1480.
20	7.78	32.63	20	25.47	252.3	0.51	0.05	1479.
30	7.75	32.64	30	25.48	251.6	0.76	0.12	1479.
50	6.45	32.66	50	25.67	233.7	1.26	0.32	1475.
75	5.69	32.73	75	25.82	219.4	1.83	0.68	1472.
100	5.17	32.80	99	25.94	208.5	2.36	1.15	1470.
125	4.51	33.21	124	26.34	171.0	2.84	1.70	1469.
150	4.25	33.62	149	26.69	137.7	3.22	2.23	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	8.30	32.61	73.	5.72	32.72
5.	8.27	32.62	75.	5.69	32.73
7.	8.22	32.62	78.	5.39	32.74
8.	8.29	32.62	90.	5.32	32.77
9.	8.05	32.62	95.	5.28	32.78
12.	7.89	32.63	98.	5.24	32.78
15.	7.80	32.63	102.	5.10	32.82
37.	7.72	32.64	105.	5.05	32.86
42.	7.68	32.64	115.	4.80	32.98
44.	7.60	32.65	120.	4.61	33.13
45.	7.50	32.65	125.	4.51	33.21
48.	6.60	32.65	135.	4.36	33.41
51.	6.38	32.66	140.	4.32	33.48
55.	6.22	32.67	143.	4.33	33.53
58.	6.13	32.68	147.	4.26	33.57
65.	6.10	32.70	150.	4.25	33.62
68.	6.02	32.71			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-128

DATE 20/ 6/70

POSITION 50- 0.0N, 144-53.0W GMT 16.5

RESULTS OF STP CAST 38 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.34	32.61	0	25.37	261.2	0.0	0.0	1481.
10	8.31	32.61	10	25.38	261.1	0.26	0.01	1481.
20	7.83	32.63	20	25.46	253.1	0.52	0.05	1479.
30	7.78	32.63	30	25.47	252.3	0.77	0.12	1479.
50	6.64	32.66	50	25.65	235.8	1.27	0.32	1475.
75	5.67	32.74	75	25.83	218.7	1.83	0.68	1472.
100	5.22	32.78	99	25.92	210.6	2.37	1.15	1471.
125	4.45	33.28	124	26.40	165.3	2.84	1.70	1468.
150	4.22	33.60	149	26.68	139.0	3.21	2.21	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	8.34	32.61	67.	6.05	32.71
9.	8.34	32.61	70.	5.84	32.72
11.	8.28	32.61	76.	5.64	32.74
12.	8.12	32.61	81.	5.40	32.75
13.	8.02	32.62	87.	5.34	32.77
15.	7.92	32.62	89.	5.29	32.77
18.	7.84	32.63	94.	5.27	32.77
24.	7.80	32.63	100.	5.22	32.78
39.	7.75	32.64	105.	5.06	32.86
43.	7.68	32.65	110.	4.88	32.96
45.	7.40	32.65	116.	4.69	33.06
48.	7.18	32.66	120.	4.62	33.14
49.	6.90	32.66	124.	4.46	33.25
50.	6.64	32.66	129.	4.40	33.39
51.	6.50	32.66	132.	4.33	33.47
53.	6.35	32.66	138.	4.26	33.53
56.	6.23	32.67	140.	4.27	33.56
58.	6.19	32.68	142.	4.24	33.58
63.	6.16	32.70	150.	4.22	33.60

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-129

DATE 21/ 6/70

POSITION 50- 2.0N, 145- 5.0W GMT 4.5

RESULTS OF STP CAST 29 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.65	32.62	0	25.33	264.9	0.0	0.0	1482.
10	8.64	32.62	10	25.34	265.1	0.26	0.01	1482.
20	7.79	32.64	20	25.48	251.7	0.52	0.05	1479.
30	7.72	32.65	30	25.49	250.3	0.77	0.12	1479.
50	6.34	32.69	50	25.71	229.7	1.25	0.31	1474.
75	5.38	32.75	75	25.88	214.1	1.80	0.66	1471.
100	5.08	32.84	99	25.98	204.6	2.33	1.13	1470.
125	4.45	33.31	124	26.42	162.8	2.80	1.67	1468.
150	4.24	33.62	149	26.69	137.6	3.18	2.19	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	8.65	32.62	108.	4.99	32.88
10.	8.64	32.62	111.	4.88	32.96
12.	8.55	32.63	113.	4.86	32.98
15.	7.87	32.64	118.	4.63	33.12
17.	7.81	32.64	120.	4.58	33.16
30.	7.72	32.65	124.	4.45	33.30
33.	7.67	32.65	128.	4.44	33.34
42.	6.67	32.67	129.	4.40	33.36
45.	6.58	32.68	138.	4.39	33.49
53.	6.20	32.70	139.	4.35	33.51
57.	5.94	32.71	144.	4.31	33.56
73.	5.39	32.75	147.	4.30	33.59
87.	5.30	32.77	150.	4.24	33.62
95.	5.23	32.79	155.	4.23	33.64
100.	5.08	32.84			



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-130

DATE 21/ 6/70

POSITION 50- 5.0N, 145- 2.0W GMT 16.5

RESULTS OF STD CAST 30 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.65	32.62	0	25.33	264.9	0.0	0.0	1482.
10	8.65	32.62	10	25.33	265.2	0.27	0.01	1482.
20	8.24	32.63	20	25.40	259.0	0.53	0.05	1481.
30	7.80	32.63	30	25.47	252.6	0.78	0.12	1480.
50	7.57	32.65	50	25.52	248.6	1.29	0.32	1479.
75	5.95	32.72	75	25.78	223.2	1.87	0.69	1473.
100	5.28	32.78	99	25.91	211.3	2.40	1.17	1471.
125	4.65	33.13	124	26.26	178.3	2.90	1.74	1469.
150	4.31	33.57	149	26.64	142.2	3.30	2.30	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	8.65	32.62	88.	5.38	32.76
11.	8.65	32.62	100.	5.28	32.78
16.	8.49	32.62	102.	5.21	32.78
21.	8.18	32.63	107.	5.15	32.81
23.	7.93	32.63	113.	4.98	32.86
27.	7.82	32.63	119.	4.89	32.94
35.	7.77	32.64	123.	4.68	33.10
48.	7.71	32.65	128.	4.60	33.18
50.	7.57	32.65	131.	4.53	33.24
60.	6.30	32.67	135.	4.51	33.29
63.	6.23	32.68	140.	4.40	33.41
73.	6.10	32.71	144.	4.40	33.50
79.	5.65	32.74	147.	4.32	33.56
81.	5.59	32.74	150.	4.31	33.57
83.	5.45	32.75	154.	4.34	33.60

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-131

DATE 21/ 6/70

POSITION 50- 1.0N, 145- 0.0W GMT 21.0

RESULTS OF STP CAST 26 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.60	32.63	0	25.35	263.4	0.0	0.0	1482.
10	7.89	32.64	10	25.46	253.1	0.26	0.01	1480.
20	7.83	32.64	20	25.47	252.4	0.51	0.05	1480.
30	7.78	32.64	30	25.48	251.8	0.76	0.12	1479.
50	6.26	32.68	50	25.71	229.7	1.24	0.31	1474.
75	5.52	32.74	75	25.85	216.7	1.81	0.67	1471.
100	5.22	32.79	99	25.92	210.1	2.34	1.14	1471.
125	4.50	33.25	124	26.37	168.1	2.83	1.70	1469.
150	4.27	33.59	149	26.66	140.4	3.21	2.23	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	8.60	32.63	80.	5.39	32.75
1.	8.60	32.63	85.	5.38	32.77
6.	8.24	32.63	98.	5.25	32.78
8.	8.17	32.63	101.	5.20	32.79
10.	7.89	32.64	103.	5.19	32.80
31.	7.77	32.64	112.	4.90	32.91
33.	7.67	32.64	117.	4.83	32.97
40.	6.71	32.66	124.	4.51	33.23
47.	6.34	32.68	139.	4.30	33.49
51.	6.24	32.68	144.	4.30	33.53
58.	6.21	32.68	146.	4.35	33.56
65.	6.15	32.70	148.	4.27	33.57
75.	5.52	32.74	154.	4.26	33.62

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-132

DATE 22/ 6/70

POSITION 50- 5.0N, 145- 7.0W GMT 0.1

RESULTS OF STD CAST 29 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.35	32.61	0	25.37	261.3	0.0	0.0	1481.
10	8.35	32.62	10	25.38	261.1	0.26	0.01	1481.
20	8.24	32.62	20	25.40	259.6	0.52	0.05	1481.
30	7.90	32.63	30	25.45	254.3	0.78	0.12	1480.
50	7.01	32.66	50	25.60	240.8	1.28	0.32	1477.
75	5.67	32.72	75	25.82	219.7	1.85	0.68	1472.
100	5.28	32.78	99	25.91	211.3	2.38	1.16	1471.
125	4.64	33.10	124	26.24	180.2	2.88	1.73	1469.
150	4.29	33.58	149	26.65	141.2	3.28	2.29	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	8.35	32.61	68.	5.85	32.71
12.	8.35	32.62	74.	5.74	32.72
13.	8.27	32.62	79.	5.41	32.74
17.	8.22	32.62	92.	5.30	32.77
20.	8.24	32.62	100.	5.28	32.78
22.	8.07	32.62	103.	5.18	32.79
25.	8.07	32.63	107.	5.14	32.83
30.	7.90	32.63	112.	5.00	32.87
32.	7.75	32.64	119.	4.93	32.91
43.	7.67	32.64	127.	4.54	33.17
48.	7.20	32.65	140.	4.38	33.42
55.	6.55	32.67	145.	4.38	33.48
57.	6.29	32.68	147.	4.35	33.52
58.	6.19	32.68	150.	4.29	33.58
62.	6.15	32.70			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-133

DATE 22/ 6/70

POSITION 50- 5.0N, 145- 7.0W GMT 0.3

RESULTS OF STP CAST 31 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.32	32.62	0	25.38	260.1	0.0	0.0	1481.
10	8.32	32.62	10	25.38	260.5	0.26	0.01	1481.
20	8.32	32.62	20	25.38	260.7	0.52	0.05	1481.
30	8.17	32.63	30	25.41	257.9	0.78	0.12	1481.
50	6.95	32.65	50	25.60	240.4	1.28	0.32	1477.
75	5.66	32.72	75	25.82	219.4	1.85	0.69	1472.
100	5.19	32.79	99	25.93	209.8	2.39	1.16	1470.
125	4.55	33.17	124	26.30	174.1	2.88	1.73	1469.
150	4.23	33.63	149	26.70	136.8	3.27	2.27	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	8.32	32.62	74.	5.68	32.72
23.	8.32	32.62	78.	5.61	32.74
29.	8.25	32.63	85.	5.35	32.76
32.	8.00	32.63	92.	5.31	32.77
33.	8.00	32.63	99.	5.20	32.78
37.	7.73	32.64	104.	5.14	32.81
46.	7.68	32.65	107.	5.05	32.85
50.	6.95	32.65	113.	5.02	32.88
52.	6.82	32.66	115.	4.93	32.90
56.	6.42	32.67	119.	4.88	32.95
58.	6.25	32.67	123.	4.61	33.11
61.	6.19	32.67	127.	4.50	33.24
62.	6.14	32.69	135.	4.43	33.34
64.	6.05	32.70	144.	4.34	33.53
69.	5.80	32.71	150.	4.23	33.63
73.	5.76	32.72			



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-134

DATE 22/ 6/70

POSITION 50- 5.0N, 145- 7.0W GMT 0.4

RESULTS OF STP CAST 25 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.30	32.61	0	25.38	260.6	0.0	0.0	1481.
10	8.29	32.61	10	25.38	260.5	0.26	0.01	1481.
20	8.28	32.62	20	25.39	260.1	0.52	0.05	1481.
30	8.03	32.63	30	25.44	255.6	0.78	0.12	1480.
50	7.05	32.66	50	25.60	241.0	1.28	0.32	1477.
75	5.74	32.73	75	25.82	219.8	1.85	0.69	1472.
100	5.22	32.79	99	25.93	209.9	2.39	1.16	1471.
125	4.53	33.22	124	26.35	170.1	2.87	1.72	1469.
150	4.23	33.61	149	26.68	138.3	3.25	2.25	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	8.30	32.61	98.	5.26	32.78
20.	8.28	32.62	102.	5.18	32.80
24.	8.25	32.63	105.	5.08	32.85
38.	7.73	32.64	115.	4.94	32.91
47.	7.66	32.65	121.	4.72	33.13
50.	7.05	32.66	123.	4.58	33.17
55.	6.50	32.67	127.	4.48	33.28
61.	6.20	32.67	138.	4.40	33.47
65.	6.08	32.70	139.	4.33	33.50
69.	5.87	32.71	144.	4.29	33.55
74.	5.79	32.73	146.	4.25	33.57
82.	5.38	32.75	150.	4.23	33.61
86.	5.33	32.76			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-135

DATE 22/ 6/70

POSITION 50- 5.0N, 145- 7.0W GMT 0.6

RESULTS OF STP CAST 33 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.28	32.62	0	25.39	259.6	0.0	0.0	1481.
10	8.28	32.62	10	25.39	260.0	0.26	0.01	1481.
20	8.10	32.63	20	25.42	256.8	0.52	0.05	1481.
30	8.08	32.63	30	25.43	256.7	0.78	0.12	1481.
50	6.50	32.66	50	25.67	234.0	1.27	0.32	1475.
75	5.49	32.74	75	25.85	216.5	1.84	0.68	1471.
100	5.26	32.78	99	25.91	211.1	2.37	1.16	1471.
125	4.61	33.12	124	26.25	178.8	2.87	1.72	1469.
150	4.26	33.57	149	26.65	141.6	3.26	2.27	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	8.28	32.62	69.	5.89	32.70
11.	8.28	32.62	72.	5.66	32.72
15.	8.21	32.62	77.	5.37	32.75
16.	8.16	32.62	88.	5.32	32.76
20.	8.10	32.63	90.	5.33	32.77
25.	8.10	32.63	95.	5.28	32.77
28.	8.11	32.63	100.	5.26	32.78
33.	8.04	32.63	103.	5.22	32.79
36.	7.72	32.64	108.	5.03	32.85
41.	7.66	32.64	119.	4.87	32.96
43.	7.52	32.64	125.	4.61	33.12
45.	7.18	32.65	133.	4.44	33.34
50.	6.50	32.66	135.	4.41	33.38
52.	6.34	32.67	141.	4.40	33.44
55.	6.31	32.67	145.	4.29	33.53
59.	6.26	32.67	150.	4.26	33.57
67.	5.92	32.70			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-136

DATE 22/ 6/70

POSITION 50- 5.0N, 145- 7.0W GMT 0.7

RESULTS OF STD CAST 33 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.30	32.62	0	25.39	259.9	0.0	0.0	1481.
10	8.29	32.62	10	25.39	260.2	0.26	0.01	1481.
20	8.27	32.62	20	25.39	260.0	0.52	0.05	1481.
30	7.90	32.62	30	25.45	255.0	0.78	0.12	1480.
50	6.73	32.67	50	25.65	236.1	1.27	0.32	1476.
75	5.65	32.72	75	25.82	219.3	1.84	0.68	1472.
100	5.28	32.78	99	25.91	211.3	2.38	1.16	1471.
125	4.61	33.14	124	26.27	177.4	2.87	1.72	1469.
150	4.25	33.59	149	26.66	140.0	3.25	2.26	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	8.30	32.62	77.	5.52	32.74
7.	8.28	32.62	85.	5.37	32.76
10.	8.29	32.62	95.	5.33	32.77
19.	8.28	32.62	100.	5.28	32.78
27.	8.23	32.62	105.	5.20	32.79
30.	7.90	32.62	110.	4.98	32.88
33.	7.74	32.63	113.	4.94	32.90
40.	7.68	32.64	117.	4.77	33.01
42.	7.61	32.64	120.	4.69	33.06
45.	7.02	32.64	124.	4.66	33.10
50.	6.73	32.67	127.	4.52	33.22
55.	6.40	32.67	130.	4.44	33.32
58.	6.18	32.68	135.	4.40	33.42
61.	6.17	32.67	141.	4.34	33.50
65.	6.02	32.69	143.	4.27	33.54
70.	5.93	32.70	150.	4.25	33.59
73.	5.78	32.71			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-137

DATE 22/ 6/70

POSITION 50- 2.0N, 145- 3.0W GMT 3.0

RESULTS OF STP CAST 34 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.26	32.62	0	25.39	259.3	0.0	0.0	1481.
10	8.26	32.62	10	25.39	259.7	0.26	0.01	1481.
20	8.10	32.62	20	25.42	257.6	0.52	0.05	1481.
30	7.72	32.62	30	25.47	252.5	0.77	0.12	1479.
50	6.14	32.74	50	25.78	223.7	1.25	0.31	1473.
75	5.36	32.76	75	25.89	213.4	1.79	0.66	1471.
100	5.01	32.86	99	26.00	202.4	2.32	1.12	1470.
125	4.37	33.44	124	26.53	152.3	2.75	1.62	1468.
150	4.19	33.67	149	26.73	133.5	3.10	2.11	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	8.26	32.62	82.	5.31	32.76
14.	8.26	32.62	88.	5.28	32.78
16.	8.17	32.62	90.	5.24	32.78
18.	8.20	32.62	100.	5.01	32.86
22.	8.00	32.62	104.	4.82	32.97
26.	7.89	32.63	107.	4.75	33.06
27.	7.89	32.63	114.	4.43	33.28
30.	7.72	32.62	118.	4.42	33.34
33.	7.72	32.63	121.	4.36	33.39
40.	6.55	32.69	125.	4.37	33.44
45.	6.27	32.72	128.	4.35	33.51
50.	6.14	32.74	133.	4.36	33.58
56.	5.97	32.76	139.	4.31	33.61
57.	5.97	32.76	141.	4.31	33.63
59.	5.93	32.76	148.	4.20	33.66
65.	5.89	32.77	152.	4.19	33.68
75.	5.36	32.76	155.	4.18	33.69



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-138

DATE 22/ 6/70

POSITION 49-58.0N, 145- 4.0W GMT 5.7

RESULTS OF STP CAST 31 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.15	32.62	0	25.41	257.8	0.0	0.0	1480.
10	8.15	32.62	10	25.41	258.1	0.26	0.01	1481.
20	8.13	32.62	20	25.41	257.9	0.52	0.05	1481.
30	7.97	32.63	30	25.44	255.2	0.77	0.12	1480.
50	6.21	32.66	50	25.71	230.2	1.26	0.32	1474.
75	5.29	32.76	75	25.89	212.7	1.82	0.67	1470.
100	4.85	32.92	99	26.07	195.8	2.33	1.13	1469.
125	4.41	33.40	124	26.50	155.7	2.78	1.64	1468.
150	4.23	33.63	149	26.70	137.0	3.14	2.14	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	8.15	32.62	89.	5.03	32.83
17.	8.15	32.62	93.	5.00	32.86
21.	8.12	32.62	98.	4.88	32.90
28.	8.03	32.63	103.	4.81	32.96
33.	7.87	32.63	109.	4.80	33.00
40.	7.55	32.64	120.	4.44	33.27
45.	6.80	32.65	125.	4.41	33.40
48.	6.30	32.66	127.	4.38	33.45
53.	6.08	32.67	130.	4.36	33.49
57.	6.07	32.68	136.	4.27	33.58
62.	5.80	32.71	142.	4.25	33.60
64.	5.75	32.72	145.	4.26	33.62
70.	5.41	32.74	147.	4.24	33.62
80.	5.17	32.78	151.	4.23	33.63
81.	5.16	32.79	152.	4.21	33.63
85.	5.07	32.81			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-139

DATE 22/ 6/70

POSITION 50- 3.0N, 145- 1.0W GMT 9.0

RESULTS OF STP CAST 31 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.02	32.61	0	25.42	256.7	0.0	0.0	1480.
10	8.02	32.62	10	25.43	256.4	0.26	0.01	1480.
20	8.02	32.63	20	25.43	255.9	0.51	0.05	1480.
30	8.02	32.64	30	25.44	255.4	0.77	0.12	1480.
50	6.15	32.68	50	25.73	228.1	1.25	0.31	1473.
75	5.36	32.75	75	25.88	214.2	1.80	0.66	1471.
100	4.96	32.89	99	26.04	199.2	2.33	1.13	1470.
125	4.38	33.39	124	26.49	156.1	2.77	1.63	1468.
150	4.27	33.63	149	26.69	137.2	3.13	2.14	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	8.02	32.61	97.	5.01	32.85
34.	8.02	32.64	101.	4.94	32.91
45.	6.31	32.67	103.	4.84	32.94
46.	6.22	32.67	106.	4.81	32.97
48.	6.21	32.67	117.	4.43	33.27
53.	6.05	32.70	120.	4.42	33.31
57.	6.07	32.73	124.	4.38	33.38
58.	6.09	32.73	128.	4.38	33.42
61.	5.83	32.72	130.	4.36	33.43
65.	5.62	32.74	132.	4.39	33.50
70.	5.44	32.74	135.	4.34	33.52
75.	5.36	32.75	140.	4.31	33.55
80.	5.31	32.76	145.	4.27	33.59
88.	5.22	32.77	150.	4.27	33.63
93.	5.15	32.80	153.	4.26	33.63
96.	5.06	32.84			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-140

DATE 22/ 6/70

POSITION 49-53.0N. 145-11.0W GMT 15.0

RESULTS OF STP CAST 24 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.00	32.63	0	25.44	255.0	0.0	0.0	1480.
10	8.00	32.63	10	25.44	255.1	0.26	0.01	1480.
20	8.00	32.64	20	25.44	255.0	0.51	0.05	1480.
30	8.00	32.64	30	25.45	255.0	0.77	0.12	1480.
50	6.57	32.70	50	25.69	231.9	1.26	0.32	1475.
75	5.52	32.77	75	25.88	214.4	1.82	0.67	1471.
100	4.98	32.87	99	26.02	200.9	2.34	1.14	1470.
125	4.34	33.42	124	26.52	153.5	2.78	1.65	1468.
150	4.11	33.67	149	26.74	132.6	3.14	2.13	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	8.00	32.63	105.	4.85	32.96
36.	8.00	32.64	110.	4.76	33.01
40.	7.80	32.66	113.	4.59	33.09
45.	7.19	32.68	115.	4.42	33.19
50.	6.57	32.70	122.	4.31	33.34
53.	6.39	32.71	125.	4.34	33.42
62.	6.01	32.74	130.	4.31	33.50
65.	5.96	32.75	135.	4.24	33.58
73.	5.53	32.77	139.	4.09	33.62
76.	5.51	32.77	145.	4.12	33.65
82.	5.26	32.78	150.	4.11	33.67
98.	5.03	32.84	152.	4.10	33.68

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-141

DATE 22/ 6/70

POSITION 49-47.0N, 145-11.0W GMT 17.8

RESULTS OF STP CAST 27 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.97	32.63	0	25.44	254.5	0.0	0.0	1480.
10	7.97	32.63	10	25.44	254.9	0.25	0.01	1480.
20	7.97	32.63	20	25.44	255.0	0.51	0.05	1480.
30	7.97	32.63	30	25.44	255.2	0.76	0.12	1480.
50	6.23	32.69	50	25.73	228.3	1.25	0.31	1474.
75	5.34	32.77	75	25.90	212.1	1.80	0.66	1471.
100	5.05	32.83	99	25.98	205.0	2.32	1.13	1470.
125	4.40	33.27	124	26.40	165.0	2.79	1.66	1468.
150	4.07	33.60	149	26.69	137.5	3.16	2.18	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.97	32.63	78.	5.26	32.78
35.	7.97	32.63	88.	5.15	32.80
37.	7.90	32.65	100.	5.05	32.83
38.	7.60	32.65	109.	4.90	32.91
40.	6.88	32.66	111.	4.80	32.96
42.	6.57	32.67	117.	4.59	33.12
45.	6.34	32.69	122.	4.45	33.23
48.	6.25	32.69	126.	4.39	33.29
49.	6.26	32.69	130.	4.25	33.39
57.	6.04	32.71	138.	4.13	33.50
64.	5.71	32.75	141.	4.11	33.52
67.	5.52	32.76	146.	4.14	33.56
69.	5.47	32.76	150.	4.07	33.60
72.	5.43	32.77			



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-142

DATE 22/ 6/70

POSITION 49-58.0N, 144-46.0W GMT 21.3

RESULTS OF STP CAST 30 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.00	32.63	0	25.44	255.0	0.0	0.0	1480.
10	8.00	32.63	10	25.44	255.3	0.26	0.01	1480.
20	7.99	32.63	20	25.44	255.2	0.51	0.05	1480.
30	7.97	32.64	30	25.45	254.7	0.77	0.12	1480.
50	6.86	32.66	50	25.62	238.5	1.27	0.32	1476.
75	5.72	32.76	75	25.84	217.7	1.83	0.68	1472.
100	5.13	32.81	99	25.95	207.1	2.36	1.15	1470.
125	4.68	33.17	124	26.29	175.7	2.85	1.71	1469.
150	4.33	33.61	149	26.67	139.4	3.24	2.25	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	8.00	32.63	80.	5.55	32.76
15.	8.00	32.63	86.	5.35	32.76
40.	7.95	32.64	88.	5.32	32.76
42.	7.83	32.64	95.	5.16	32.80
45.	7.57	32.65	102.	5.12	32.82
47.	7.23	32.65	108.	5.04	32.86
50.	6.86	32.66	109.	4.98	32.90
52.	6.40	32.67	112.	4.96	32.92
55.	6.27	32.68	116.	4.79	33.00
57.	6.27	32.69	125.	4.68	33.17
59.	6.19	32.69	127.	4.57	33.24
63.	6.16	32.71	136.	4.46	33.37
67.	6.04	32.72	142.	4.33	33.52
72.	5.73	32.75	148.	4.32	33.58
76.	5.72	32.76	150.	4.33	33.61

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-143

DATE 23/ 6/70

POSITION 50- 3.0N, 144-55.0W GMT 0.1

RESULTS OF STP CAST 33 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.99	32.63	0	25.44	254.8	0.0	0.0	1480.
10	7.96	32.63	10	25.44	254.8	0.25	0.01	1480.
20	7.97	32.63	20	25.44	255.0	0.51	0.05	1480.
30	7.96	32.63	30	25.44	255.1	0.76	0.12	1480.
50	6.35	32.71	50	25.73	228.4	1.25	0.31	1474.
75	5.40	32.77	75	25.89	213.1	1.81	0.67	1471.
100	5.15	32.81	99	25.95	207.6	2.33	1.13	1470.
125	4.66	33.16	124	26.28	176.4	2.83	1.70	1469.
150	4.31	33.58	149	26.65	141.3	3.22	2.25	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.99	32.63	83.	5.27	32.78
10.	7.96	32.63	85.	5.26	32.78
25.	7.97	32.63	88.	5.25	32.79
32.	7.96	32.63	95.	5.17	32.80
37.	7.91	32.63	100.	5.15	32.81
38.	7.77	32.64	110.	5.05	32.84
40.	7.50	32.65	113.	5.00	32.86
42.	6.77	32.67	118.	4.90	32.92
47.	6.38	32.70	122.	4.75	33.07
50.	6.35	32.71	127.	4.60	33.22
52.	6.28	32.71	131.	4.50	33.29
55.	6.15	32.71	134.	4.50	33.34
61.	6.05	32.72	137.	4.42	33.39
65.	5.84	32.75	142.	4.40	33.45
70.	5.63	32.76	147.	4.31	33.55
75.	5.40	32.77	150.	4.31	33.58
80.	5.27	32.77			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-144

DATE 23/ 6/70

POSITION 49-57.0N, 144-50.0W GMT 3.0

RESULTS OF STP CAST 34 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.93	32.64	0	25.46	253.2	0.0	0.0	1480.
10	7.93	32.64	10	25.46	253.6	0.25	0.01	1480.
20	7.93	32.64	20	25.46	253.8	0.51	0.05	1480.
30	7.93	32.64	30	25.46	253.9	0.76	0.12	1480.
50	6.42	32.68	50	25.69	231.6	1.26	0.32	1475.
75	5.29	32.77	75	25.90	212.1	1.81	0.67	1470.
100	4.84	32.93	99	26.08	195.3	2.32	1.13	1469.
125	4.43	33.46	124	26.55	151.2	2.75	1.62	1469.
150	4.26	33.69	149	26.74	132.6	3.10	2.10	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.93	32.64	76.	5.24	32.77
38.	7.93	32.64	82.	5.15	32.80
40.	7.91	32.65	87.	5.12	32.81
41.	7.87	32.65	92.	5.02	32.83
45.	7.24	32.66	98.	4.95	32.86
47.	6.90	32.67	100.	4.84	32.93
48.	6.58	32.67	105.	4.70	33.04
50.	6.42	32.68	110.	4.61	33.14
55.	6.16	32.72	117.	4.53	33.33
56.	6.10	32.73	120.	4.46	33.40
57.	5.93	32.74	123.	4.46	33.43
60.	5.89	32.74	129.	4.37	33.53
63.	5.81	32.75	132.	4.37	33.58
66.	5.59	32.76	134.	4.33	33.59
67.	5.57	32.76	143.	4.30	33.67
68.	5.46	32.76	145.	4.30	33.68
73.	5.38	32.76	150.	4.26	33.69

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-145

DATE 23/ 6/70

POSITION 49-56.0N, 144-54.0W GMT 5.7

RESULTS OF STP CAST 29 POINTS TAKEN FROM ANALOG TRACE

FRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.92	32.62	0	25.44	254.6	0.0	0.0	1480.
10	7.92	32.62	10	25.45	254.7	0.25	0.01	1480.
20	7.91	32.63	20	25.45	254.6	0.51	0.05	1480.
30	7.91	32.63	30	25.45	254.5	0.76	0.12	1480.
50	7.13	32.63	50	25.57	243.9	1.27	0.32	1477.
75	5.44	32.77	75	25.88	213.7	1.83	0.68	1471.
100	4.85	32.90	99	26.05	197.8	2.34	1.13	1469.
125	4.41	33.35	124	26.46	159.5	2.79	1.65	1468.
150	4.13	33.62	149	26.70	136.5	3.16	2.16	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.92	32.62	95.	4.89	32.87
35.	7.91	32.63	102.	4.84	32.91
40.	7.90	32.63	115.	4.55	33.13
45.	7.87	32.63	116.	4.56	33.15
48.	7.78	32.63	125.	4.41	33.35
52.	6.48	32.64	126.	4.36	33.37
54.	6.25	32.72	130.	4.30	33.43
55.	6.20	32.72	133.	4.26	33.46
60.	6.15	32.72	134.	4.22	33.46
66.	5.74	32.75	142.	4.14	33.56
69.	5.67	32.76	144.	4.14	33.58
71.	5.59	32.76	146.	4.13	33.60
80.	5.26	32.78	148.	4.14	33.62
82.	5.16	32.79	150.	4.13	33.62
84.	5.14	32.79			



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-146

DATE 23/ 6/70

POSITION 50- 0.0N, 145- 5.0W GMT 9.0

RESULTS OF STP CAST 26 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.97	32.62	0	25.44	255.2	0.0	0.0	1480.
10	7.97	32.62	10	25.44	255.4	0.26	0.01	1480.
20	7.97	32.62	20	25.44	255.4	0.51	0.05	1480.
30	7.97	32.63	30	25.44	255.4	0.77	0.12	1480.
50	7.75	32.65	50	25.49	251.0	1.28	0.32	1480.
75	5.29	32.77	75	25.90	211.9	1.83	0.68	1470.
100	4.94	32.87	99	26.02	200.8	2.35	1.14	1470.
125	4.37	33.34	124	26.45	159.8	2.81	1.66	1468.
150	4.30	33.66	149	26.72	135.3	3.17	2.17	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.97	32.62	85.	5.13	32.79
40.	7.97	32.63	91.	5.10	32.80
42.	7.95	32.64	95.	4.98	32.83
48.	7.90	32.65	100.	4.94	32.87
50.	7.75	32.65	110.	4.78	33.01
52.	6.60	32.66	115.	4.69	33.08
57.	6.11	32.68	119.	4.57	33.19
63.	5.87	32.71	125.	4.37	33.34
65.	5.74	32.72	130.	4.38	33.44
70.	5.40	32.75	134.	4.35	33.51
75.	5.29	32.77	140.	4.35	33.58
77.	5.23	32.77	147.	4.30	33.65
81.	5.20	32.78	150.	4.30	33.66

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-147

DATE 23/ 6/70

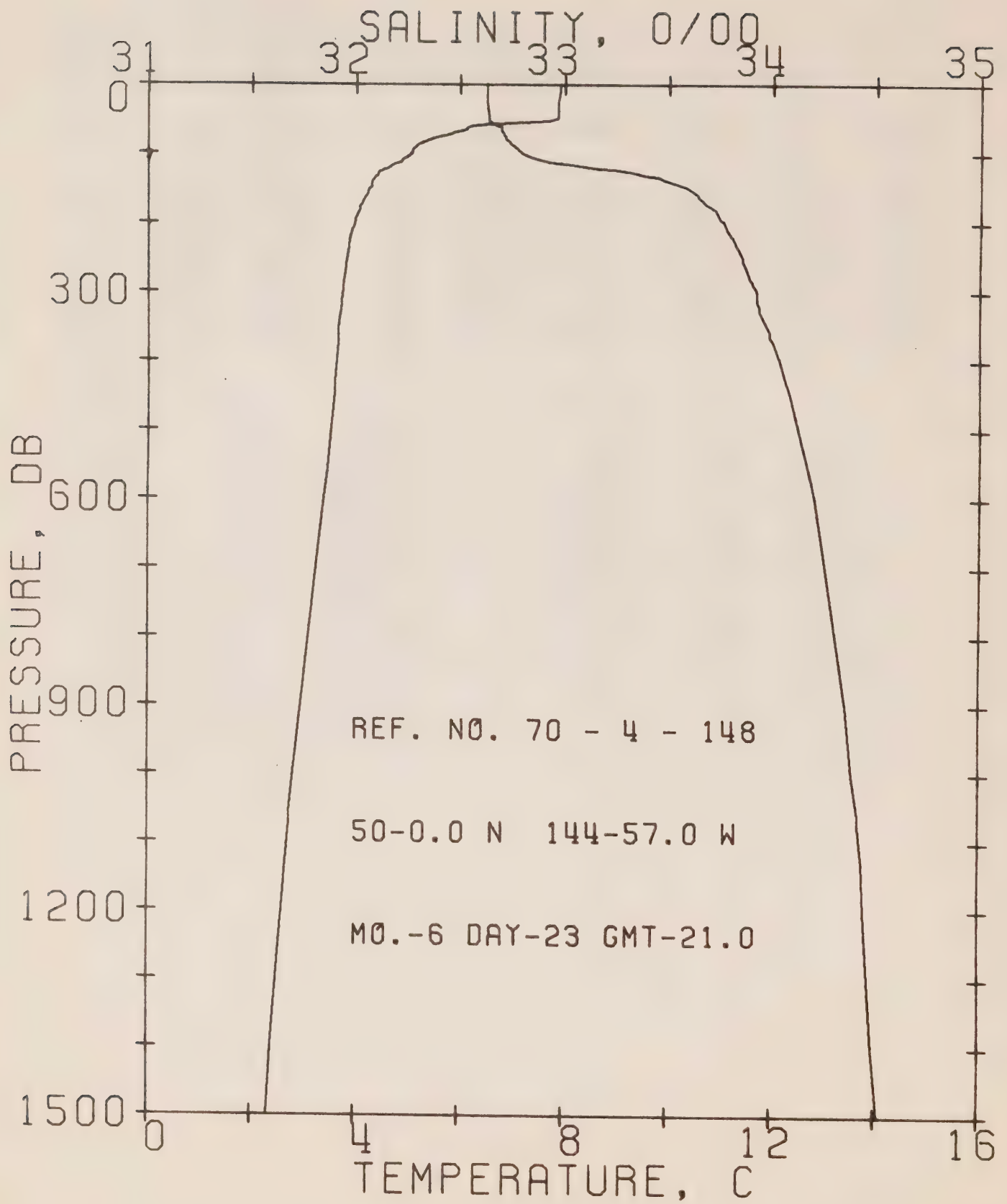
POSITION 50- 2.0N. 144-58.0W GMT 16.5

RESULTS OF STP CAST 25 POINTS TAKEN FROM ANALOG TRACE

PFRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.87	32.63	0	25.46	253.2	0.0	0.0	1479.
10	7.87	32.63	10	25.46	253.5	0.25	0.01	1480.
20	7.87	32.63	20	25.46	253.7	0.51	0.05	1480.
30	7.87	32.63	30	25.46	253.8	0.76	0.12	1480.
50	6.17	32.71	50	25.75	226.3	1.25	0.31	1474.
75	5.39	32.77	75	25.89	213.1	1.80	0.66	1471.
100	5.03	32.82	99	25.97	205.5	2.32	1.13	1470.
125	4.36	33.44	124	26.53	152.3	2.77	1.65	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.87	32.63	85.	5.20	32.78
34.	7.87	32.63	88.	5.20	32.79
36.	7.82	32.64	95.	5.14	32.81
37.	7.60	32.64	100.	5.03	32.82
40.	7.25	32.66	106.	4.94	32.88
47.	6.32	32.70	108.	4.86	32.93
50.	6.17	32.71	117.	4.53	33.24
51.	6.15	32.71	124.	4.40	33.41
55.	6.15	32.72	126.	4.33	33.47
60.	6.01	32.73	132.	4.28	33.58
63.	5.85	32.74	138.	4.30	33.63
67.	5.75	32.76	147.	4.23	33.66
77.	5.30	32.77			







PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-148

DATE 23/ 6/70

POSITION 50- 0.0N, 144-57.0W GMT 21.0

RESULTS OF STP CAST 76 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.93	32.63	0	25.45	254.0	0.0	0.0	1480.
10	7.93	32.63	10	25.45	254.3	0.25	0.01	1480.
20	7.91	32.63	20	25.45	254.3	0.51	0.05	1480.
30	7.90	32.63	30	25.46	254.1	0.76	0.12	1480.
50	7.86	32.64	50	25.47	253.2	1.27	0.32	1480.
75	5.67	32.72	75	25.82	220.0	1.85	0.69	1472.
100	5.09	32.80	99	25.95	207.7	2.38	1.17	1470.
125	4.49	33.28	124	26.40	165.2	2.86	1.71	1469.
150	4.29	33.59	149	26.66	140.1	3.24	2.24	1469.
175	4.12	33.69	174	26.76	131.2	3.58	2.80	1468.
200	4.00	33.77	199	26.83	124.4	3.90	3.41	1468.
225	3.90	33.82	223	26.88	120.1	4.20	4.07	1469.
250	3.86	33.86	248	26.92	116.6	4.50	4.79	1469.
300	3.77	33.93	298	26.98	110.8	5.07	6.38	1469.
400	3.65	34.04	397	27.08	102.2	6.14	10.19	1471.
500	3.55	34.13	496	27.16	95.2	7.12	14.71	1472.
600	3.42	34.21	595	27.24	88.6	8.04	19.84	1473.
800	3.12	34.31	793	27.35	79.4	9.72	31.78	1475.
1000	2.83	34.39	990	27.44	71.5	11.22	45.52	1477.
1200	2.61	34.45	1188	27.51	65.9	12.59	60.78	1480.
1500	2.32	34.52	1484	27.59	59.0	14.46	86.55	1484.

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-150

DATE 24/ 6/70

POSITION 50- 0.0N, 145- 2.0W GMT 4.5

RESULTS OF STD CAST 29 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.94	32.63	0	25.45	254.1	0.0	0.0	1480.
10	7.94	32.63	10	25.45	254.5	0.25	0.01	1480.
20	7.93	32.63	20	25.45	254.4	0.51	0.05	1480.
30	7.89	32.64	30	25.46	253.4	0.76	0.12	1480.
50	6.20	32.72	50	25.75	225.8	1.25	0.31	1474.
75	5.52	32.77	75	25.88	214.2	1.80	0.66	1471.
100	5.12	32.81	99	25.95	207.3	2.32	1.13	1470.
125	4.58	33.21	124	26.33	171.7	2.81	1.69	1469.
150	4.32	33.60	149	26.67	140.0	3.19	2.22	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.94	32.63	73.	5.60	32.77
18.	7.94	32.63	79.	5.36	32.78
30.	7.89	32.64	80.	5.36	32.78
33.	7.87	32.64	87.	5.22	32.79
35.	7.80	32.65	100.	5.12	32.81
40.	7.28	32.65	105.	5.10	32.82
42.	6.90	32.66	110.	5.02	32.86
45.	6.32	32.67	120.	4.76	33.06
50.	6.20	32.72	129.	4.43	33.33
52.	6.16	32.72	135.	4.37	33.42
56.	6.15	32.72	137.	4.36	33.45
60.	5.99	32.72	140.	4.31	33.51
62.	5.89	32.75	143.	4.33	33.56
67.	5.82	32.76	150.	4.32	33.60
71.	5.63	32.77			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-151

DATE 24/ 6/70

POSITION 49-55.0N, 144-57.0W GMT 16.6

RESULTS OF STP CAST 35 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.86	32.64	0	25.47	252.2	0.0	0.0	1479.
10	7.86	32.64	10	25.47	252.6	0.25	0.01	1479.
20	7.85	32.64	20	25.47	252.7	0.51	0.05	1480.
30	7.81	32.64	30	25.47	252.3	0.76	0.12	1480.
50	6.30	32.66	50	25.69	231.6	1.25	0.32	1474.
75	5.11	32.80	75	25.95	207.5	1.79	0.66	1470.
100	4.80	32.96	99	26.10	192.8	2.30	1.11	1469.
125	4.23	33.53	124	26.62	144.1	2.72	1.59	1468.
150	4.25	33.67	149	26.73	134.0	3.07	2.08	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.86	32.64	85.	4.96	32.83
25.	7.85	32.64	87.	4.94	32.84
27.	7.78	32.64	94.	4.91	32.89
31.	7.82	32.64	96.	4.82	32.91
34.	7.77	32.64	102.	4.79	32.98
36.	7.77	32.64	105.	4.72	33.04
38.	7.72	32.64	113.	4.45	33.23
40.	7.54	32.64	114.	4.45	33.24
41.	7.43	32.64	116.	4.36	33.25
45.	7.13	32.65	117.	4.26	33.26
50.	6.30	32.66	121.	4.19	33.44
55.	5.86	32.68	123.	4.22	33.49
60.	5.50	32.73	125.	4.23	33.53
62.	5.38	32.76	137.	4.21	33.60
69.	5.17	32.79	144.	4.24	33.64
72.	5.16	32.80	145.	4.21	33.64
74.	5.12	32.80	150.	4.25	33.67
80.	5.08	32.82			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-152

DATE 25/ 6/70

POSITION 50- 1.0N, 145-10.0W GMT 4.5

RESULTS OF STP CAST 34 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.88	32.63	0	25.46	253.3	0.0	0.0	1479.
10	7.88	32.63	10	25.46	253.7	0.25	0.01	1480.
20	7.88	32.63	20	25.46	253.8	0.51	0.05	1480.
30	7.86	32.64	30	25.46	253.3	0.76	0.12	1480.
50	6.20	32.68	50	25.72	228.8	1.26	0.32	1474.
75	5.37	32.78	75	25.90	212.2	1.80	0.67	1471.
100	4.93	32.89	99	26.04	199.4	2.32	1.13	1470.
125	4.38	33.39	124	26.49	156.5	2.77	1.64	1468.
150	4.20	33.68	149	26.74	132.7	3.12	2.13	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.88	32.63	95.	5.05	32.83
22.	7.88	32.63	102.	4.88	32.91
35.	7.85	32.64	106.	4.71	33.02
41.	7.76	32.65	110.	4.72	33.04
45.	7.45	32.66	113.	4.61	33.13
50.	6.20	32.68	118.	4.52	33.25
54.	5.96	32.73	120.	4.45	33.29
59.	5.93	32.75	122.	4.40	33.35
64.	5.73	32.76	127.	4.37	33.41
69.	5.59	32.76	131.	4.37	33.48
73.	5.38	32.77	132.	4.33	33.52
76.	5.36	32.78	137.	4.29	33.58
77.	5.33	32.78	140.	4.29	33.63
79.	5.31	32.78	142.	4.26	33.64
82.	5.23	32.79	144.	4.25	33.65
87.	5.14	32.80	147.	4.21	33.67
90.	5.13	32.81	150.	4.20	33.68



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-153

DATE 25/ 6/70

POSITION 50- 1.0N. 145-21.0W GMT 16.5

RESULTS OF STP CAST 26 POINTS TAKEN FROM ANALOG TRACE

FRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.85	32.64	0	25.47	252.1	0.0	0.0	1479.
10	7.85	32.64	10	25.47	252.3	0.25	0.01	1479.
20	7.85	32.64	20	25.47	252.3	0.50	0.05	1480.
30	7.85	32.65	30	25.47	252.3	0.76	0.12	1480.
50	7.72	32.66	50	25.50	249.8	1.26	0.32	1480.
75	5.43	32.75	75	25.87	215.0	1.84	0.69	1471.
100	5.16	32.79	99	25.94	208.8	2.37	1.16	1470.
125	4.51	33.26	124	26.38	167.3	2.85	1.71	1469.
150	4.30	33.63	149	26.69	137.5	3.21	2.22	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.85	32.64	97.	5.19	32.78
42.	7.85	32.65	101.	5.15	32.80
44.	7.82	32.65	111.	4.92	32.91
47.	7.84	32.66	113.	4.78	32.96
50.	7.72	32.66	119.	4.69	33.11
60.	6.60	32.67	120.	4.60	33.14
64.	6.10	32.70	123.	4.53	33.22
68.	5.78	32.73	125.	4.51	33.26
75.	5.43	32.75	129.	4.43	33.39
78.	5.35	32.76	130.	4.40	33.42
85.	5.32	32.76	139.	4.31	33.60
90.	5.27	32.76	150.	4.30	33.63
94.	5.26	32.77	152.	4.29	33.64

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-154

DATE 26/ 6/70

POSITION 50- 2.0N, 144-55.0W GMT 4.6

RESULTS OF STP CAST 32 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.02	32.65	0	25.45	253.7	0.0	0.0	1480.
10	8.02	32.65	10	25.45	254.1	0.25	0.01	1480.
20	8.02	32.65	20	25.45	254.2	0.51	0.05	1480.
30	8.01	32.65	30	25.45	254.3	0.76	0.12	1480.
50	7.23	32.66	50	25.57	243.3	1.27	0.32	1478.
75	5.33	32.76	75	25.89	212.9	1.82	0.68	1471.
100	5.05	32.87	99	26.01	202.3	2.35	1.14	1470.
125	4.43	33.34	124	26.45	160.4	2.80	1.66	1468.
150	4.31	33.63	149	26.69	137.6	3.17	2.18	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	8.02	32.65	95.	5.16	32.81
25.	8.02	32.65	102.	5.01	32.89
37.	8.00	32.65	105.	4.90	32.93
43.	7.94	32.65	107.	4.88	32.95
47.	7.58	32.66	111.	4.67	33.08
50.	7.23	32.66	113.	4.63	33.10
52.	6.53	32.66	117.	4.63	33.16
55.	6.25	32.67	123.	4.45	33.30
60.	6.05	32.69	125.	4.43	33.34
65.	5.63	32.73	127.	4.40	33.39
70.	5.40	32.74	130.	4.39	33.41
74.	5.33	32.76	135.	4.32	33.49
78.	5.33	32.77	137.	4.36	33.52
83.	5.31	32.78	139.	4.36	33.55
88.	5.22	32.79	144.	4.29	33.59
90.	5.20	32.79	150.	4.31	33.63

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-155

DATE 26/ 6/70

POSITION 50- 0.0N, 145- 5.0W GMT 16.4

RESULTS OF STP CAST 30 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.93	32.63	0	25.45	254.0	0.0	0.0	1480.
10	7.93	32.63	10	25.45	254.2	0.25	0.01	1480.
20	7.93	32.64	20	25.45	254.1	0.51	0.05	1480.
30	7.93	32.64	30	25.46	254.0	0.76	0.12	1480.
50	6.91	32.68	50	25.63	237.7	1.26	0.32	1476.
75	5.39	32.78	75	25.90	212.2	1.82	0.67	1471.
100	4.92	32.87	99	26.02	200.6	2.33	1.13	1469.
125	4.40	33.23	124	26.36	168.3	2.80	1.66	1468.
150	4.25	33.67	149	26.73	134.0	3.16	2.17	1469.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.93	32.63	84.	5.13	32.82
37.	7.93	32.64	93.	4.98	32.84
43.	7.88	32.65	100.	4.92	32.87
45.	7.70	32.66	103.	4.85	32.90
47.	7.43	32.66	110.	4.78	32.96
50.	6.91	32.68	117.	4.60	33.11
52.	6.50	32.69	122.	4.56	33.14
57.	6.05	32.71	125.	4.40	33.23
60.	5.84	32.72	128.	4.31	33.37
62.	5.89	32.74	132.	4.28	33.47
66.	5.75	32.75	134.	4.23	33.51
68.	5.53	32.76	138.	4.25	33.60
72.	5.50	32.77	140.	4.24	33.62
80.	5.21	32.80	143.	4.27	33.65
83.	5.13	32.81	150.	4.25	33.67

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-156

DATE 27/ 6/70

POSITION 50- 1.0N, 145- 0.0W GMT 4.5

RESULTS OF STD CAST 36 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.00	32.63	0	25.44	255.0	0.0	0.0	1480.
10	8.00	32.63	10	25.44	255.3	0.26	0.01	1480.
20	8.00	32.63	20	25.44	255.5	0.51	0.05	1480.
30	8.00	32.63	30	25.44	255.6	0.77	0.12	1480.
50	7.10	32.72	50	25.64	237.1	1.27	0.32	1477.
75	5.35	32.80	75	25.92	210.4	1.82	0.67	1471.
100	4.84	32.93	99	26.08	195.3	2.33	1.12	1469.
125	4.42	33.41	124	26.50	155.1	2.77	1.63	1469.
150	4.23	33.66	149	26.72	134.6	3.13	2.13	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	8.00	32.63	93.	5.00	32.85
30.	8.00	32.63	97.	4.92	32.89
38.	7.98	32.64	98.	4.87	32.90
40.	7.95	32.64	104.	4.78	32.99
45.	7.72	32.66	108.	4.76	33.02
50.	7.10	32.72	113.	4.64	33.17
54.	6.20	32.76	118.	4.54	33.30
57.	6.02	32.77	119.	4.46	33.34
63.	5.97	32.78	125.	4.42	33.41
70.	5.63	32.79	130.	4.33	33.49
71.	5.61	32.79	135.	4.33	33.53
76.	5.28	32.80	138.	4.30	33.55
77.	5.27	32.80	140.	4.23	33.59
78.	5.23	32.80	142.	4.29	33.62
81.	5.22	32.81	145.	4.30	33.63
83.	5.14	32.82	148.	4.29	33.65
85.	5.11	32.82	150.	4.23	33.66
87.	5.06	32.83	155.	4.20	33.67



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-157

DATE 27/ 6/70

POSITION 49-58.0N, 144-54.0W GMT 16.5

RESULTS OF STP CAST 26 POINTS TAKEN FROM ANALOG TRACE

FRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.90	32.64	0	25.46	252.8	0.0	0.0	1479.
10	7.90	32.64	10	25.46	253.1	0.25	0.01	1480.
20	7.90	32.64	20	25.46	253.0	0.51	0.05	1480.
30	7.90	32.65	30	25.47	253.0	0.76	0.12	1480.
50	7.47	32.67	50	25.54	245.8	1.26	0.32	1479.
75	5.53	32.77	75	25.87	214.6	1.82	0.68	1471.
100	5.01	32.83	99	25.99	204.2	2.35	1.14	1470.
125	4.39	33.26	124	26.39	166.0	2.81	1.68	1468.
150	4.14	33.61	149	26.69	137.4	3.18	2.19	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.90	32.64	95.	5.09	32.81
45.	7.90	32.65	101.	4.99	32.84
48.	7.87	32.66	102.	4.94	32.85
55.	6.48	32.69	107.	4.86	32.90
60.	5.90	32.71	116.	4.61	33.08
66.	5.62	32.74	117.	4.60	33.09
70.	5.59	32.76	121.	4.40	33.21
71.	5.54	32.76	125.	4.39	33.26
75.	5.53	32.77	128.	4.26	33.33
76.	5.45	32.77	133.	4.19	33.44
80.	5.38	32.78	143.	4.15	33.56
83.	5.27	32.79	148.	4.13	33.60
91.	5.11	32.80	150.	4.14	33.61

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-158

DATE 28/ 6/70

POSITION 50- 3.0N, 145-12.0W GMT 4.5

RESULTS OF STP CAST 24 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.00	32.62	0	25.43	255.7	0.0	0.0	1480.
10	8.00	32.62	10	25.43	256.1	0.26	0.01	1480.
20	8.00	32.62	20	25.43	256.2	0.51	0.05	1480.
30	8.00	32.62	30	25.43	256.4	0.77	0.12	1480.
50	7.92	32.63	50	25.45	254.8	1.28	0.33	1480.
75	5.72	32.76	75	25.84	217.5	1.87	0.70	1472.
100	5.10	32.82	99	25.96	206.4	2.40	1.17	1470.
125	4.46	33.32	124	26.43	162.2	2.87	1.71	1469.
150	4.23	33.62	149	26.69	137.5	3.23	2.22	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	8.00	32.62	90.	5.24	32.79
40.	8.00	32.62	95.	5.18	32.80
45.	7.98	32.62	100.	5.10	32.82
50.	7.92	32.63	110.	4.91	32.90
53.	7.83	32.64	120.	4.63	33.17
55.	7.67	32.65	123.	4.48	33.27
60.	6.90	32.66	125.	4.46	33.32
62.	6.50	32.68	128.	4.38	33.38
65.	6.17	32.70	133.	4.35	33.45
67.	6.06	32.72	135.	4.35	33.51
75.	5.72	32.76	142.	4.26	33.60
86.	5.26	32.78	150.	4.23	33.62

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-159

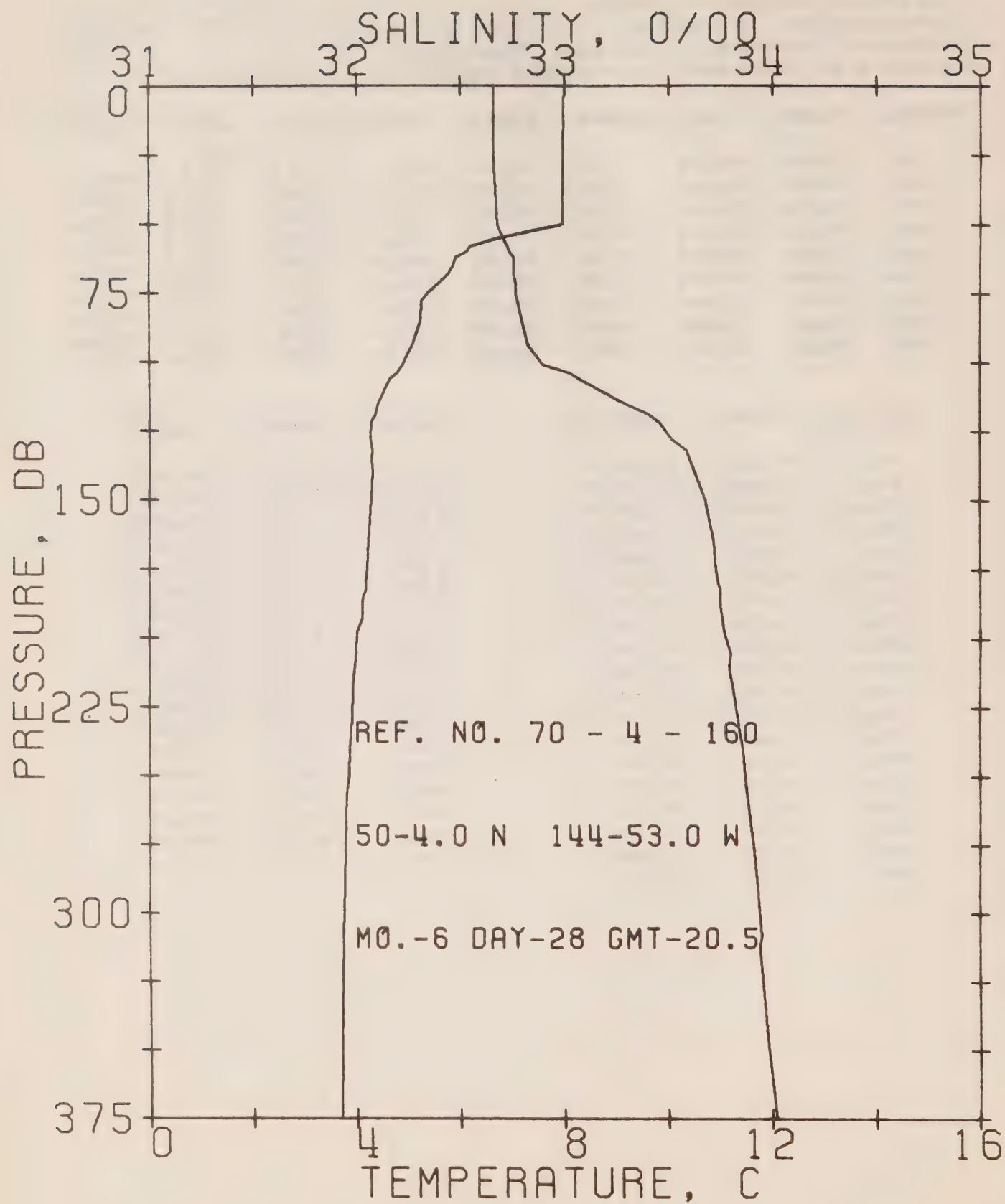
DATE 28/ 6/70

POSITION 49-58.0N, 144-57.0W GMT 16.5

RESULTS OF STP CAST 37 POINTS TAKEN FROM ANALCG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.92	32.64	0	25.46	253.1	0.0	0.0	1480.
10	7.92	32.64	10	25.46	253.3	0.25	0.01	1480.
20	7.92	32.64	20	25.46	253.3	0.51	0.05	1480.
30	7.92	32.65	30	25.46	253.3	0.76	0.12	1480.
50	7.72	32.67	50	25.51	248.8	1.27	0.32	1480.
75	5.45	32.78	75	25.89	213.0	1.83	0.68	1471.
100	5.00	32.85	99	26.00	203.0	2.35	1.14	1470.
125	4.34	33.37	124	26.48	156.9	2.80	1.66	1468.
150	4.18	33.65	149	26.72	134.8	3.16	2.16	1468.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	7.92	32.64	104.	4.89	32.92
45.	7.92	32.65	106.	4.78	32.95
49.	7.87	32.67	111.	4.66	33.03
52.	7.41	32.68	113.	4.53	33.13
55.	7.11	32.69	116.	4.52	33.17
58.	6.70	32.71	119.	4.43	33.27
60.	6.40	32.74	120.	4.44	33.28
62.	6.23	32.76	123.	4.40	33.34
65.	6.15	32.76	127.	4.29	33.41
67.	6.05	32.76	131.	4.26	33.47
68.	5.70	32.76	132.	4.28	33.53
73.	5.48	32.78	133.	4.26	33.53
76.	5.44	32.78	135.	4.28	33.55
80.	5.28	32.79	138.	4.30	33.57
83.	5.19	32.80	141.	4.22	33.59
88.	5.12	32.81	142.	4.18	33.60
95.	5.03	32.83	143.	4.21	33.61
98.	5.03	32.84	150.	4.18	33.65
100.	5.00	32.85			





PACIFIC OCEANOGRAPHIC GROUP

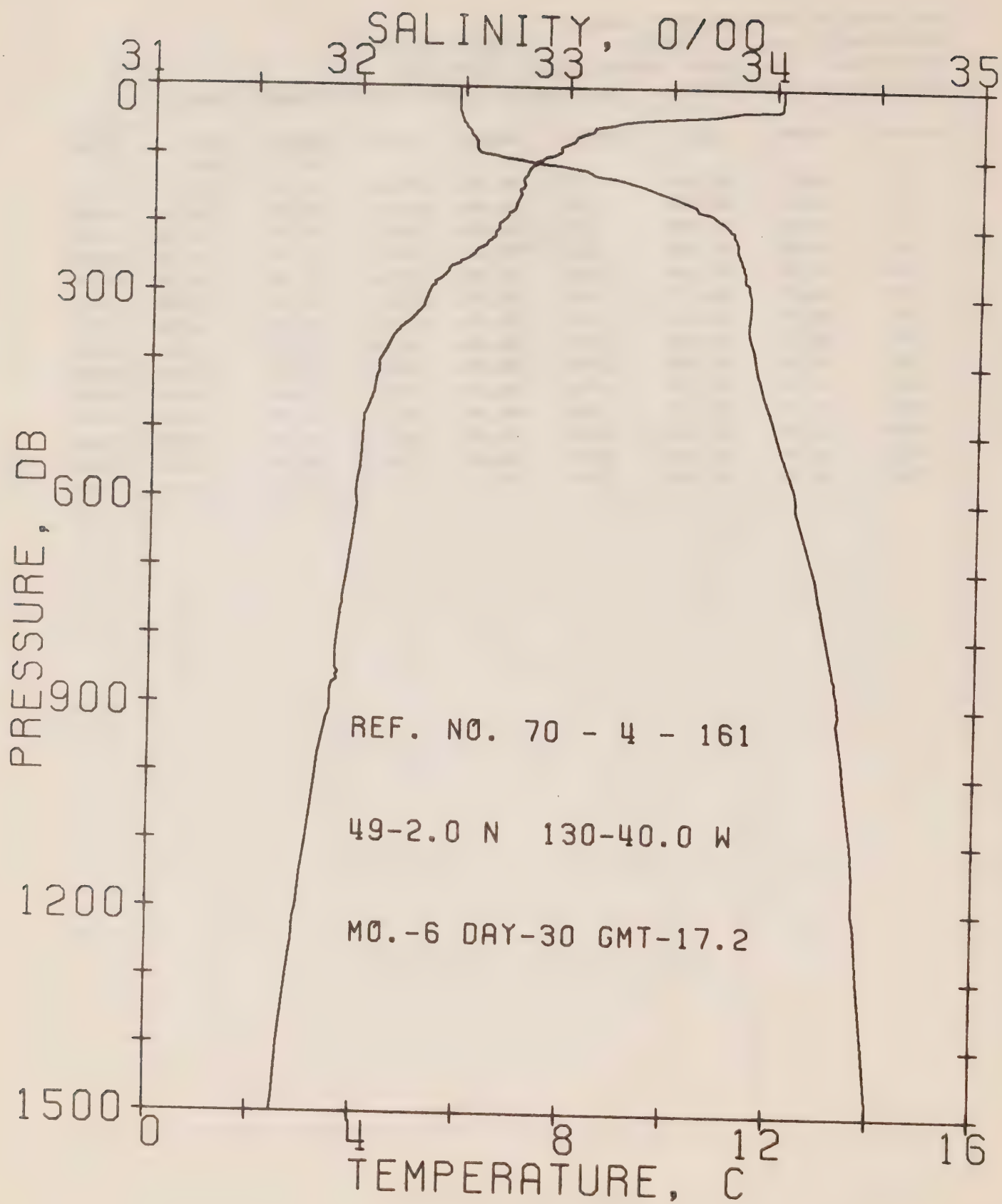
REFERENCE NO. 70- 4-160

DATE 28/ 6/70

POSITION 50- 4.0N, 144-53.0W GMT 20.5

RESULTS OF STP CAST 51 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.01	32.66	0	25.46	252.9	0.0	0.0	1480.
10	8.00	32.66	10	25.46	253.1	0.25	0.01	1480.
20	7.99	32.66	20	25.46	253.0	0.51	0.05	1480.
30	7.98	32.66	30	25.47	252.7	0.76	0.12	1480.
50	7.97	32.68	50	25.48	251.8	1.26	0.32	1481.
75	5.39	32.77	75	25.89	213.1	1.83	0.68	1471.
100	4.93	32.89	99	26.04	199.3	2.34	1.14	1470.
125	4.27	33.49	124	26.58	147.5	2.77	1.62	1468.
150	4.30	33.68	149	26.73	133.8	3.12	2.11	1469.
175	4.22	33.73	174	26.78	129.4	3.44	2.65	1469.
200	4.01	33.78	199	26.84	123.9	3.76	3.26	1469.
225	3.92	33.83	223	26.89	119.5	4.07	3.92	1469.
250	3.85	33.87	248	26.93	115.7	4.36	4.63	1469.
300	3.74	33.94	298	27.00	109.7	4.92	6.20	1469.



PACIFIC OCEANOGRAPHIC GROUP

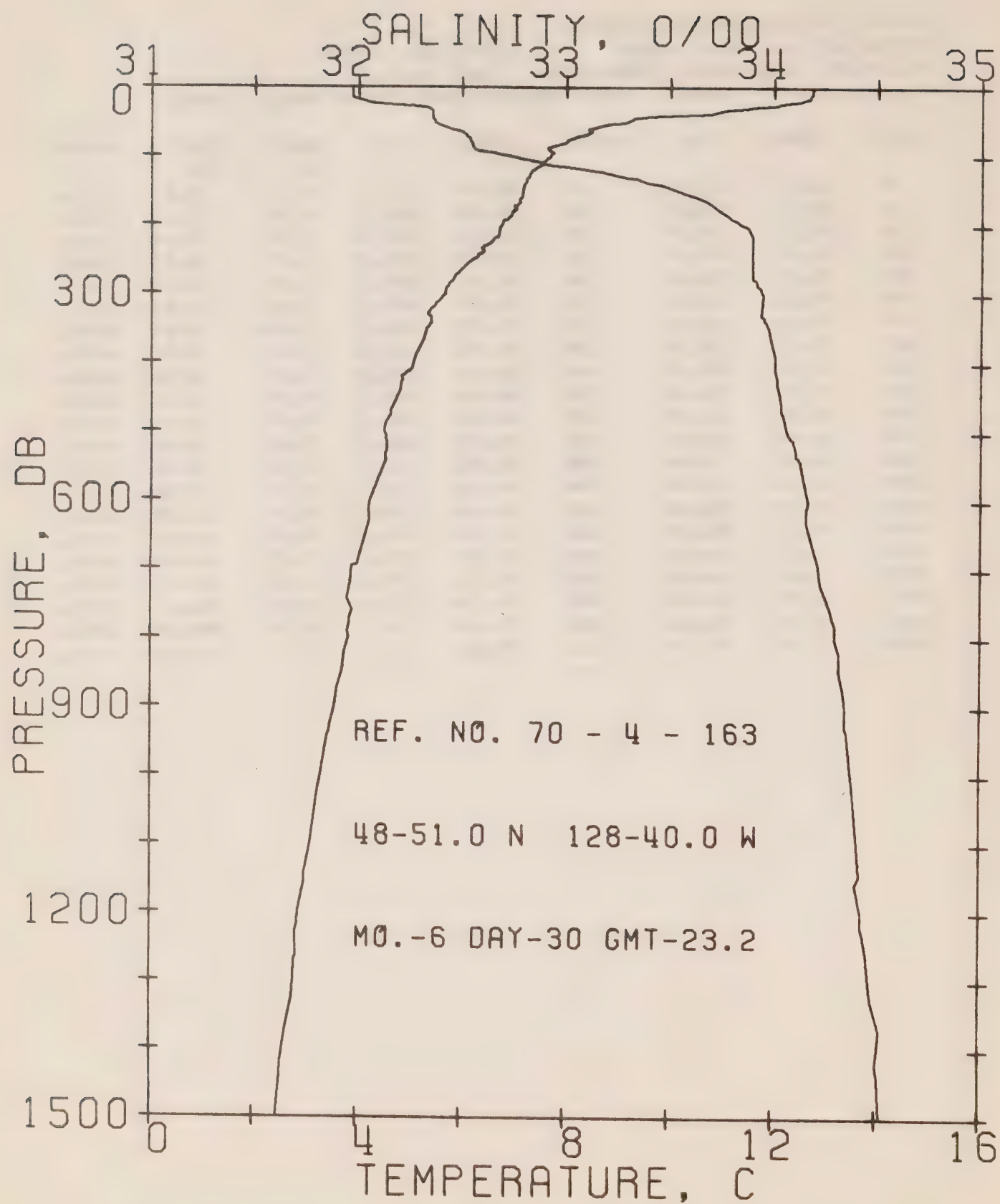
REFERENCE NO. 70- 4-161

DATE 30/ 6/70

POSITION 49- 2.0N, 130-40.0W GMT 17.2

RESULTS OF STP CAST 104 POINTS TAKEN FROM ANALOG TRACE

FRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	12.13	32.47	0	24.63	332.3	0.0	0.0	1495.
10	12.13	32.47	10	24.63	332.7	0.33	0.02	1495.
20	12.12	32.47	20	24.63	332.9	0.67	0.07	1495.
30	12.10	32.47	30	24.63	332.6	1.00	0.15	1495.
50	9.04	32.49	50	25.17	281.3	1.61	0.40	1484.
75	8.13	32.55	75	25.36	264.0	2.29	0.83	1481.
100	7.65	32.66	99	25.52	249.2	2.94	1.41	1480.
125	7.22	33.12	124	25.93	210.0	3.50	2.06	1479.
150	7.07	33.43	149	26.20	185.2	3.99	2.74	1480.
175	7.00	33.62	174	26.36	170.2	4.44	3.47	1480.
200	6.68	33.77	199	26.52	155.2	4.84	4.25	1479.
225	6.47	33.82	224	26.58	149.5	5.22	5.07	1479.
250	6.04	33.84	248	26.66	142.8	5.59	5.96	1478.
300	5.35	33.89	298	26.78	131.2	6.27	7.86	1476.
400	4.42	33.92	397	26.91	119.4	7.53	12.35	1474.
500	4.12	34.02	496	27.02	109.4	8.68	17.60	1474.
600	4.00	34.12	595	27.11	101.5	9.73	23.49	1475.
800	3.66	34.28	793	27.27	87.8	11.62	36.93	1478.
1000	3.28	34.37	991	27.38	78.3	13.28	52.11	1479.
1200	2.93	34.42	1188	27.45	71.7	14.76	68.73	1481.
1500	2.47	34.50	1484	27.56	62.1	16.76	96.07	1484.





PACIFIC OCEANOGRAPHIC GROUP

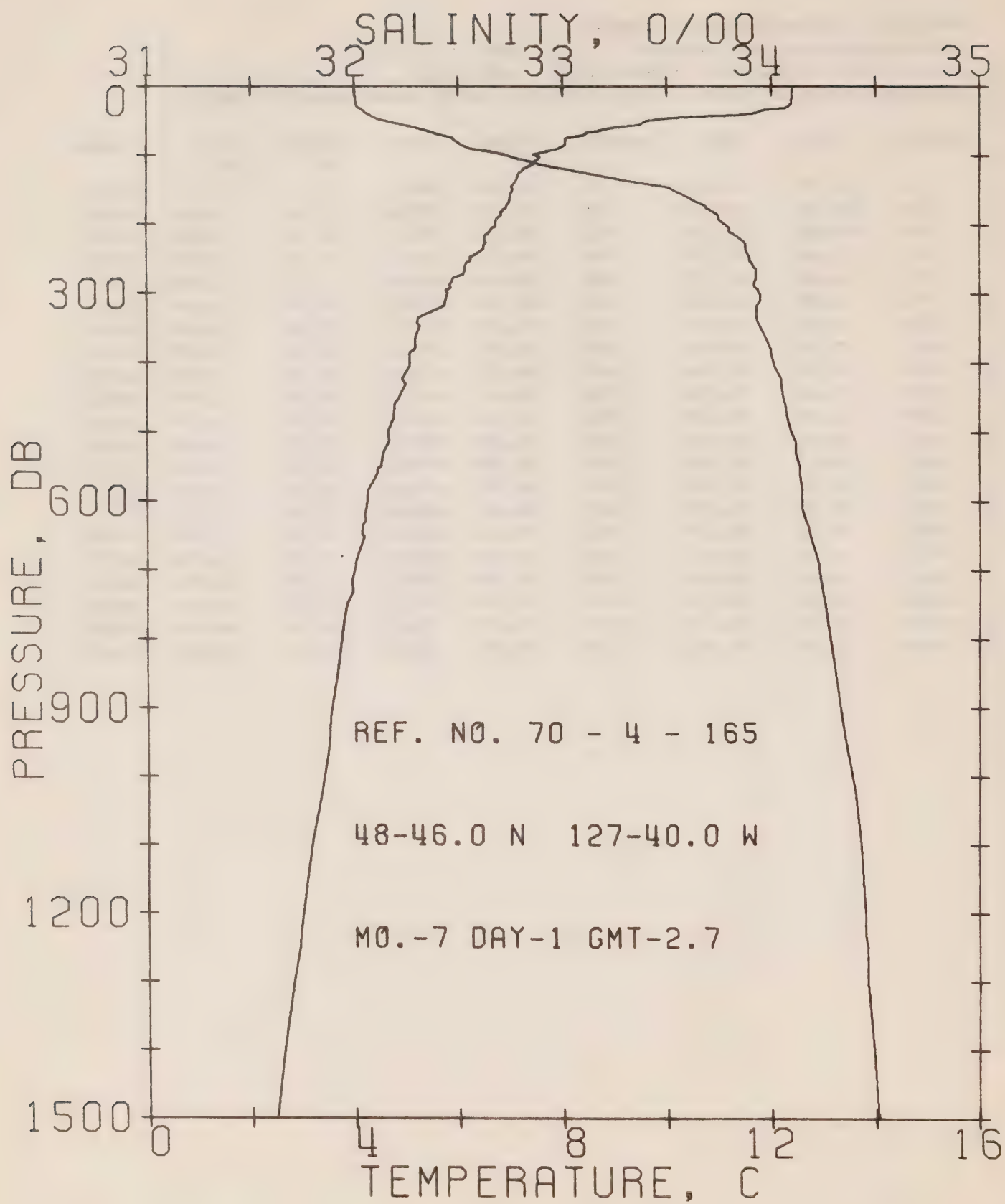
REFERENCE NO. 70- 4-163

DATE 30/ 6/70

POSITION 48-51.0N, 128-40.0W GMT 23.2

RESULTS OF STP CAST 123 POINTS TAKEN FROM ANALOG TRACE

PFESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	12.77	31.97	0	24.12	380.7	0.0	0.0	1496.
10	12.75	31.97	10	24.12	380.8	0.38	0.02	1496.
20	12.50	32.03	20	24.22	372.1	0.76	0.08	1496.
30	11.46	32.34	30	24.65	331.1	1.11	0.17	1493.
50	9.18	32.37	50	25.06	292.2	1.73	0.42	1485.
75	8.09	32.54	75	25.35	264.3	2.42	0.85	1481.
100	7.70	32.74	99	25.57	244.1	3.06	1.43	1480.
125	7.33	33.21	124	25.99	204.4	3.62	2.07	1480.
150	7.18	33.54	149	26.27	178.5	4.10	2.73	1480.
175	7.04	33.72	174	26.43	163.3	4.52	3.44	1480.
200	6.78	33.86	199	26.57	150.4	4.92	4.19	1480.
225	6.57	33.90	224	26.63	144.7	5.28	4.98	1480.
250	6.22	33.90	248	26.68	140.6	5.64	5.85	1479.
300	5.70	33.95	298	26.79	131.0	6.32	7.75	1477.
400	5.10	34.01	397	26.90	120.4	7.58	12.21	1477.
500	4.52	34.07	496	27.02	110.2	8.73	17.49	1476.
600	4.25	34.17	595	27.12	100.6	9.78	23.40	1477.
800	3.85	34.30	793	27.27	88.1	11.68	36.86	1478.
1000	3.32	34.38	991	27.39	77.7	13.33	51.96	1480.
1200	2.88	34.43	1188	27.47	70.3	14.81	68.55	1481.
1500	2.45	34.52	1484	27.58	60.5	16.76	95.25	1484.



PACIFIC OCEANOGRAPHIC GROUP

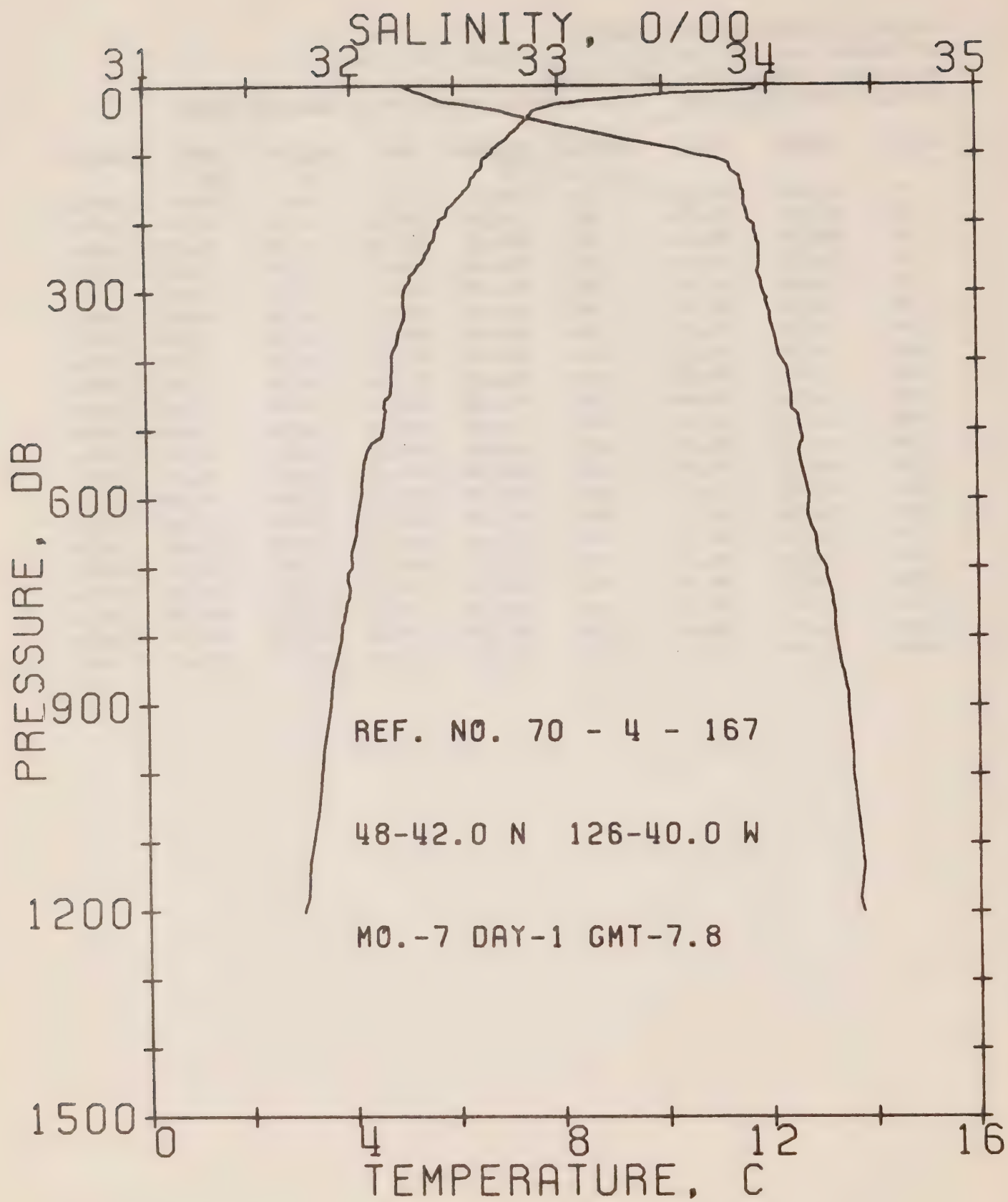
REFERENCE NO. 70- 4-165

DATE 1/ 7/70

POSITION 48-46.0N, 127-40.0W GMT 2.7

RESULTS OF STP CAST 110 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	12.42	32.00	0	24.21	372.2	0.0	0.0	1495.
10	12.41	32.00	10	24.21	372.2	0.37	0.02	1495.
20	12.40	32.01	20	24.22	372.0	0.74	0.08	1495.
30	12.32	32.02	30	24.24	369.9	1.12	0.17	1495.
50	9.62	32.15	50	24.82	315.3	1.81	0.45	1486.
75	8.05	32.48	75	25.31	268.1	2.54	0.91	1481.
100	7.49	32.74	99	25.60	241.5	3.19	1.49	1480.
125	7.18	33.11	124	25.93	210.2	3.76	2.14	1479.
150	7.06	33.53	149	26.28	177.6	4.24	2.82	1480.
175	6.94	33.69	174	26.42	164.6	4.67	3.52	1480.
200	6.73	33.78	199	26.52	155.3	5.06	4.28	1480.
225	6.53	33.87	224	26.62	146.2	5.44	5.10	1479.
250	6.25	33.90	248	26.68	141.0	5.80	5.97	1479.
300	5.82	33.95	298	26.77	132.5	6.48	7.88	1478.
400	5.08	34.01	397	26.91	119.8	7.74	12.36	1477.
500	4.66	34.10	496	27.03	109.6	8.89	17.61	1477.
600	4.25	34.15	595	27.11	102.2	9.94	23.52	1477.
800	3.77	34.28	793	27.27	88.3	11.84	37.00	1478.
1000	3.41	34.39	991	27.38	78.1	13.51	52.25	1480.
1200	3.00	34.45	1188	27.47	70.2	14.98	68.72	1482.
1500	2.47	34.51	1484	27.57	61.4	16.96	95.89	1484.





PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-167

DATE 1/ 7/70

POSITION 48-42.0N, 126-40.0W GMT 7.8

RESULTS OF STP CAST 107 POINTS TAKEN FROM ANALOG TRACE

DEFS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	11.73	32.25	0	24.53	341.5	0.0	0.0	1493.
10	11.25	32.32	10	24.67	328.5	0.34	0.02	1492.
20	8.96	32.42	20	25.13	285.1	0.64	0.06	1484.
30	7.87	32.59	30	25.42	257.0	0.91	0.13	1480.
50	7.41	32.89	50	25.73	228.5	1.39	0.33	1479.
75	7.07	33.27	75	26.07	196.2	1.92	0.66	1478.
100	6.70	33.64	99	26.41	164.1	2.37	1.06	1478.
125	6.47	33.83	124	26.59	147.3	2.75	1.50	1477.
150	6.27	33.88	149	26.66	141.4	3.11	2.00	1477.
175	5.97	33.89	174	26.71	137.0	3.46	2.57	1476.
200	5.72	33.92	199	26.76	131.9	3.80	3.22	1476.
225	5.61	33.95	223	26.80	129.0	4.12	3.92	1476.
250	5.45	33.96	248	26.82	126.6	4.44	4.69	1476.
300	5.03	33.98	298	26.89	120.8	5.06	6.43	1475.
400	4.77	34.07	397	26.99	112.2	6.23	10.60	1475.
500	4.60	34.15	496	27.07	104.9	7.32	15.58	1476.
600	4.16	34.19	595	27.15	98.3	8.33	21.24	1476.
800	3.76	34.32	793	27.29	85.8	10.16	34.29	1478.
1000	3.33	34.39	990	27.39	77.0	11.77	49.02	1480.
1200	2.98	34.44	1188	27.46	70.8	13.25	65.53	1481.

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-169

DATE 1/ 7/70

POSITION 48-38.0N, 126- 0.0W GMT 11.0

RESULTS OF STP CAST 24 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	11.17	32.07	0	24.49	345.2	0.0	0.0	1491.
10	11.17	32.07	10	24.49	345.6	0.35	0.02	1491.
20	11.17	32.07	20	24.49	345.8	0.69	0.07	1491.
30	11.02	32.12	30	24.56	339.7	1.04	0.16	1491.
50	8.03	32.53	50	25.36	263.7	1.62	0.39	1491.
75	7.19	33.02	75	25.86	216.3	2.21	0.77	1478.
100	6.83	33.59	99	26.36	169.4	2.71	1.20	1478.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	11.17	32.07	54.	7.80	32.61
21.	11.17	32.07	55.	7.64	32.63
28.	11.10	32.08	57.	7.60	32.65
32.	10.94	32.16	63.	7.30	32.80
38.	8.95	32.36	71.	7.26	32.93
40.	8.65	32.41	75.	7.19	33.02
41.	8.58	32.42	80.	7.16	33.09
43.	8.75	32.46	85.	7.08	33.18
45.	8.30	32.47	92.	7.06	33.37
48.	8.13	32.49	100.	6.83	33.59
50.	8.03	32.53	102.	6.51	33.75
52.	7.83	32.56	110.	6.50	33.75

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 4-170

DATE 1/ 7/70

POSITION 48-33.0N, 125-33.0W GMT 12.6

RESULTS OF STP CAST 23 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	10.23	32.11	0	24.68	326.8	0.0	0.0	1488.
10	10.22	32.11	10	24.69	327.1	0.33	0.02	1488.
20	9.75	32.18	20	24.82	314.6	0.65	0.07	1486.
30	8.48	32.50	30	25.27	271.7	0.94	0.14	1482.
50	7.45	33.07	50	25.86	215.7	1.42	0.34	1479.
75	6.75	33.58	75	26.36	168.8	1.92	0.65	1477.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	10.23	32.11	45.	7.65	32.96
12.	10.22	32.11	50.	7.45	33.07
17.	10.11	32.13	61.	7.35	33.17
19.	10.00	32.16	65.	7.25	33.29
20.	9.75	32.18	70.	6.95	33.47
21.	9.09	32.26	72.	6.86	33.52
27.	8.52	32.44	75.	6.75	33.53
29.	8.51	32.47	78.	6.67	33.64
34.	8.35	32.64	81.	6.63	33.63
36.	8.15	32.69	85.	6.60	33.66
42.	8.10	32.78	95.	6.59	33.66
43.	7.80	32.91			





SURFACE SALINITY AND  
TEMPERATURE OBSERVATIONS

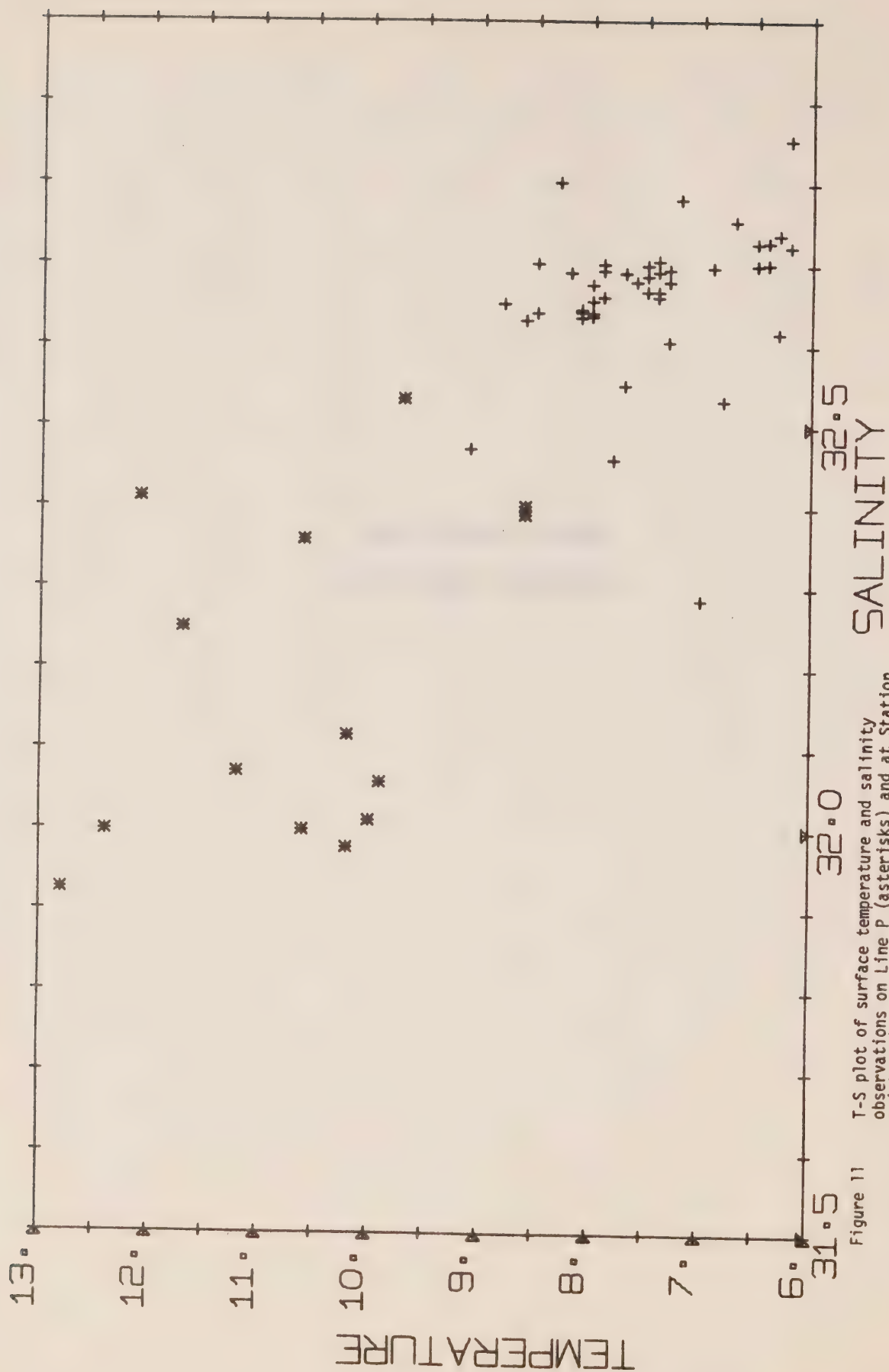


Figure 11  
T-S plot of surface temperature and salinity  
observations on Line P (asterisks) and at Station  
P (pluses) during cruise P-70-4.

SURFACE SALINITY AND TEMPERATURE OBSERVATIONS  
CRUISE REFERENCE NUMBER 70- 4

DATE/TIME				SALINITY	TEMP	LONGITUDE
YR	MO	DY	GMT	O/00	C	WEST
70	5	15	2230	32.000	10.6	125-33
70	5	15	2230	32.000	10.6	125-33
70	5	11	6236	31.979	10.2	126-40
70	5	11	6630	32.060	9.9	127-40
70	5	11	1200	32.012	10.0	128-40
70	5	11	1900	32.534	9.7	130-40
70	5	17	106	32.402	8.6	132-40
70	5	17	700	32.391	8.6	134-40
70	5	17	1306	32.459	7.8	136-40
70	5	17	2230	32.551	7.7	138-40
70	5	18	324	32.605	7.3	140-40
70	5	18	1000	32.697	6.9	142-40
70	5	19	0		6.3	145- 0
70	5	20	0		6.1	ON STATION
70	5	21	0	32.738	6.3	ON STATION
70	5	22	0	32.700	6.5	ON STATION
70	5	23	0	32.701	6.4	ON STATION
70	5	24	0	32.616	6.3	ON STATION
70	5	25	0	32.854	6.2	ON STATION
70	5	26	0	32.723	6.2	ON STATION
70	5	27	0	32.727	6.5	ON STATION
70	5	28	0	32.729	6.4	ON STATION
70	5	29	0	32.754	6.7	ON STATION
70	5	30	0	32.285	7.0	ON STATION
70	5	31	0	32.533	6.8	ON STATION
70	6	1	0	32.781	7.2	ON STATION
70	6	2	0	32.680	7.3	ON STATION
70	6	3	0	32.668	7.5	ON STATION
70	6	4	0	32.680	7.6	ON STATION
70	6	5	0	32.667	7.4	ON STATION
70	6	6	0	32.661	7.4	ON STATION
70	6	7	0	32.695	7.3	ON STATION
70	6	8	0	32.705	7.4	ON STATION
70	6	9	0	32.686	7.5	ON STATION
70	6	10	0	32.692	7.4	ON STATION
70	6	11	0	32.700	7.5	ON STATION
70	6	12	0	32.690	7.7	ON STATION
70	6	13	0	32.701	7.9	ON STATION
70	6	14	0	32.693	7.9	ON STATION
70	6	15	0	32.702	8.5	ON STATION
70	6	16	0	32.676	8.0	ON STATION
70	6	17	0	32.661	7.9	ON STATION
70	6	18	0	32.801	8.3	ON STATION
70	6	19	0	32.690	8.2	ON STATION
70	6	20	0	32.641	8.5	ON STATION
70	6	21	0	32.651	8.8	ON STATION
70	6	22	0	32.631	8.6	ON STATION
70	6	23	0		8.0	ON STATION
70	6	24	0	32.636	8.0	ON STATION

SURFACE SALINITY AND TEMPERATURE OBSERVATIONS  
CRUISE REFERENCE NUMBER 70- 4

DATE/TIME				SALINITY	TEMP	LONGITUDE
YR	MO	DY	GMT	O/00	C	WEST
70	6	25	0	32.640	8.0	ON STATION
70	6	26	0	32.656	8.0	ON STATION
70	6	27	0	32.635	8.1	ON STATION
70	6	28	0	32.642	8.1	ON STATION
70	6	29	0	32.644	8.1	ON STATION
70	6	29	0	32.494		142-40
70	6	29	1745	32.472	9.1	140-40
70	6	30	740	32.359	10.6	134-40
70	6	30	1710	32.412	12.1	130-40
70	6	30	2300	31.925	12.8	128-40
70	7	1	243	31.999	12.4	127-40
70	7	1	746	32.250	11.7	126-40
70	7	1	1102	32.072	11.2	126- 0
70	7	1	1245	32.118	10.2	125-33





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1 EP 321

71R06

Government  
Publication

PACIFIC MARINE SCIENCE REPORT 71-6

**OCEANOGRAPHIC OBSERVATIONS AT  
OCEAN STATION P (50° N, 145° W)**

**VOLUME 47**

**June 26 - August 12, 1970**

**J. Garrett, R. Bellegay, C. Panchyson, D. Smith**



**Department of the Environment  
Marine Sciences Branch  
Pacific Region  
512 Federal Bldg  
Victoria, B.C.**





MARINE SCIENCES BRANCH, PACIFIC REGION

PACIFIC MARINE SCIENCE REPORT NO. 71-6

OCEANOGRAPHIC OBSERVATIONS AT OCEAN STATION P ( $50^{\circ}\text{N}$ ,  $145^{\circ}\text{W}$ )  
VOLUME 47  
JUNE 26 - AUGUST 12, 1970

by

J. GARRETT, R. BELLEGAY, C. PANCHYSON, D. SMITH  
Marine Sciences Branch  
Department of the Environment



## INTRODUCTION

Canadian operation of Ocean Weather Station P (latitude 50°00'N, longitude 145°00'W) was inaugurated in December 1950. The station is manned by two vessels operated by the Marine Services Branch of the Ministry of Transport. They are the CCGS VANCOUVER and the CCGS QUADRA. Each ship remains on station for a period of six weeks, and is then relieved by the alternative ship, thus maintaining a continuous watch. The chief purpose of the station is to operate as a meteorological station for surface and upper-air observations and as an air-sea rescue station.

Bathythermograph observations have been made at Station P since July, 1952. A program of more extensive oceanographic observations was commenced in August, 1956. This was further extended in April, 1959, by the addition of a series of oceanographic stations along the route to and from Station P and Swiftsure Bank. These stations are known as Line P stations. The number of Stations on Line P has been increased twice and now consists of twelve stations (Fig. 1). Bathythermograph observations and surface salinity sample collections in addition to being made on Line P oceanographic stations are also made at odd meridians at 40' i.e. 139° 40'W, etc. Data observed prior to 1968 has been indexed by Collins et al, (1969).

The present record includes hydrographic data and salinity-temperature-pressure data collected from the QUADRA during the period June 26 to August 12, 1970. Mechanical and expendable bathythermograph traces obtained on this cruise are available on microfiche cards and will be available in digitized format on magnetic tape in the near future.

All physical data has been archived by the Canadian Oceanographic Data Centre (CODC), 615 Booth Street, Ottawa, Ontario, Canada. Requests for these data should be directed to CODC.

Biological and productivity data are published in the Manuscript Report series of the Fisheries Research Board of Canada (FRB), the Biological Station, Nanaimo, B.C., Canada. Requests for these data should be directed to FRB.

Bird observations are sent to Dr. M. Myres, University of Calgary, Calgary, Alberta, Canada, and Marine Mammal observations to Mr. I. McAskie, Fisheries Research Board of Canada, the Biological Station, Nanaimo, B.C. Canada.

Program of observations from CCGS QUADRA, June 26 - August 12, 1970  
(P-75-5) (CODC Ref. No. 02-70-005).

Oceanographic observations were made by Dr. J. Garrett and Messrs. R. Bellegay, C. Panchyson and D. Smith of the Department of The Environment, Marine Sciences Branch, and Mr. C. Ackley of the Institute of Oceanography, University of British Columbia.

En route to Station P, stations 4 and 5 were occupied. A Bissett-Berman 9006 STD was used to obtain continuous temperature and salinity records from the surface to (approximately) 1500 meters. Mechanical BT observations were made and surface salinity and nitrate samples taken at all Line P hydrographic and BT stations.

On Station P profiles of salinity, temperature and oxygen were obtained as follows:

- 1) Weekly Nansen bottle casts to near bottom (4200 meters).
- 11) STP casts daily to 1500 meters (weather permitting).
- 111) Mechanical BT casts were made eight times daily and a bucket salinity sample was taken daily at 0000 hours GMT.

Other observations made and data obtained on Station P were as follows:

1) Buoy Test

An uninstrumented test buoy was set on July 3. A second buoy instrumented with six geodyne current meters was set on July 10 and recovered August 2.

11) Biological

Vertical plankton hauls from 50 and 150 meters were made daily, weather permitting. Three ten minute horizontal plankton tows were made on June 30, July 9 and July 26.

111) Productivity

No productivity observations were made on this patrol.

1V) Marine Geochemistry

a) Water samples were collected for Oceanic Surface  $C^{14}$  Analysis, once with the sea water loop and once by pumping. Samples were also collected at depths to 400 meters.

b) Duplicate air samples for  $CO_2$  analysis were obtained. Once a week.

V) Marine Mammal, Bird and observations for other institutes.

a) Marine mammal and bird logs were kept.

b) Water samples were collected for the Oceanic  $C^{14}$  program of Dr. Fairhall of the University of Washington, Seattle, Washington, U. S. A.



- c) A rainwater and surface sample was collected for Scripps Institute of Oceanography, La Jolla, California, U. S. A.

En route from Station P all Line P stations except Number 8 were occupied and the Nansen bottle cast extension to 3500 meters at Station 9 was also cancelled. Mechanical BT casts were made and a surface salinity and nitrate sample collected at all Line P BT stations.

The data for this technical report was processed by Messrs. B. Minkley and D. Smith, and assembled and edited for publication by Mr. K. Abbott-Smith.

### Observational procedures

Temperatures at depth were measured by deep-sea reversing thermometers of German (Richter and Wiese) or Japanese (Yoshino Keiki Co.) manufacture. Two protected thermometers were used on all Nansen bottles, and one unprotected thermometer was used on each bottle at depths of 300 m or greater. The accuracy of protected reversing thermometers is believed to be  $\pm 0.02^\circ\text{C}$ .

Surface water temperatures were measured from a bucket sample using a deck thermometer of  $\pm 0.1^\circ\text{C}$  accuracy.

Salinity determinations were made at sea and ashore using a Bissett-Berman Laboratory Salinometer Model 6220. Accuracy using duplicate determinations is estimated to be  $\pm 0.003$  ppt.

Depth determinations were made using the "depth difference" method described in the U.S.N. Hydrographic Office Publications No. 607 (1955). Depth estimates have an approximate accuracy of  $\pm 5$  m for depths less than 1000 m, and  $\pm 0.5\%$  of depth for depths greater than 1000 m.

The dissolved oxygen analyses were done in the shipboard laboratory by a modified Winkler method (Carpenter, 1965).

Salinity-temperature-pressure data were obtained with a Bissett-Berman Model 9006 STD.

### Computations

All hydrographic data were processed with the aid of an IBM 360 computer. Reversing thermometer temperature corrections, thermometric depth calculations, and accepted depth from the "depth difference" method were computed. Extraneous thermometric depths caused by thermometer malfunctions are automatically edited and replaced. A Calcomp 563 Off-line Plotter was used to plot temperature-salinity and temperature-oxygen diagrams, as well as plots of temperature, salinity and dissolved oxygen vs  $\log_{10}$  depth. These plots were used to check the data for errors.

Missing hydrographic data were obtained using a weighted parabolas interpolation method (Reiniger and Ross, 1968). These data are indicated with an asterisk in this data record.

Analog records from the salinity-temperature-pressure instrument have been hand digitized, then replotted using the Calcomp Plotter. Digitization was continued until original and computer plotted traces were coincident. Temperature and salinity values were listed at standard pressures; integrals (depth, geopotential anomaly, and potential energy anomaly) were computed from the entire array of digitized data.

STD salinity data have been adjusted to make them compatible with Hydrographic cast salinity data. A salinity correction of -0.11 ppt was used from 0 to 1500 meters. No temperature correction was necessary.

The headings for the data listings are explained as follows:

PRESS	is pressure (decibars)
TEMP	is temperature (degrees Celsius)
SAL	is salinity (parts per thousand)
DEPTH	is reported in meters
SIGMA-T	is specific gravity anomaly
SVA	is specific volume anomaly
THETA	is potential temperature (degrees Celsius)
SVA (THETA)	is potential specific volume anomaly
DELTA D	is geopotential anomaly (J/kg)
POT EN	is potential energy in units of $10^8$ ERGS/CM <sup>2</sup>
OXY	is the concentration of dissolved oxygen expressed in milliliters per liter
V-B PERIOD	is the Väisälä-Brunt period in minutes

#### Summary of Hydrographic Data

The data are graphically summarized as follows: composite plot of temperature vs  $\log_{10}$  depth (fig. 2), composite plot of salinity vs  $\log_{10}$  depth (fig. 3) and composite plot of dissolved oxygen vs  $\log_{10}$  depth (fig. 4) for hydrographic cast data from this cruise.

## REFERENCES

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LIST OF FIGURES

- Figure 1      Chart showing Line P positions.
- Figure 2      Profiles of salinity difference between samples  
obtained from bottles and data from a Bissett-Berman  
Model 9040 STD. Ref. No. 70-005.
- Figure 3      Profiles of temperature difference between reversing  
thermometers and data from a Bissett-Berman Model  
9006 STD. Ref. No. 70-005.
- Figure 4      Composite plot of temperature vs  $\log_{10}$  depth.
- Figure 5      Composite plot of salinity vs  $\log_{10}$  depth.
- Figure 6      Composite plot of oxygen vs  $\log_{10}$  depth.



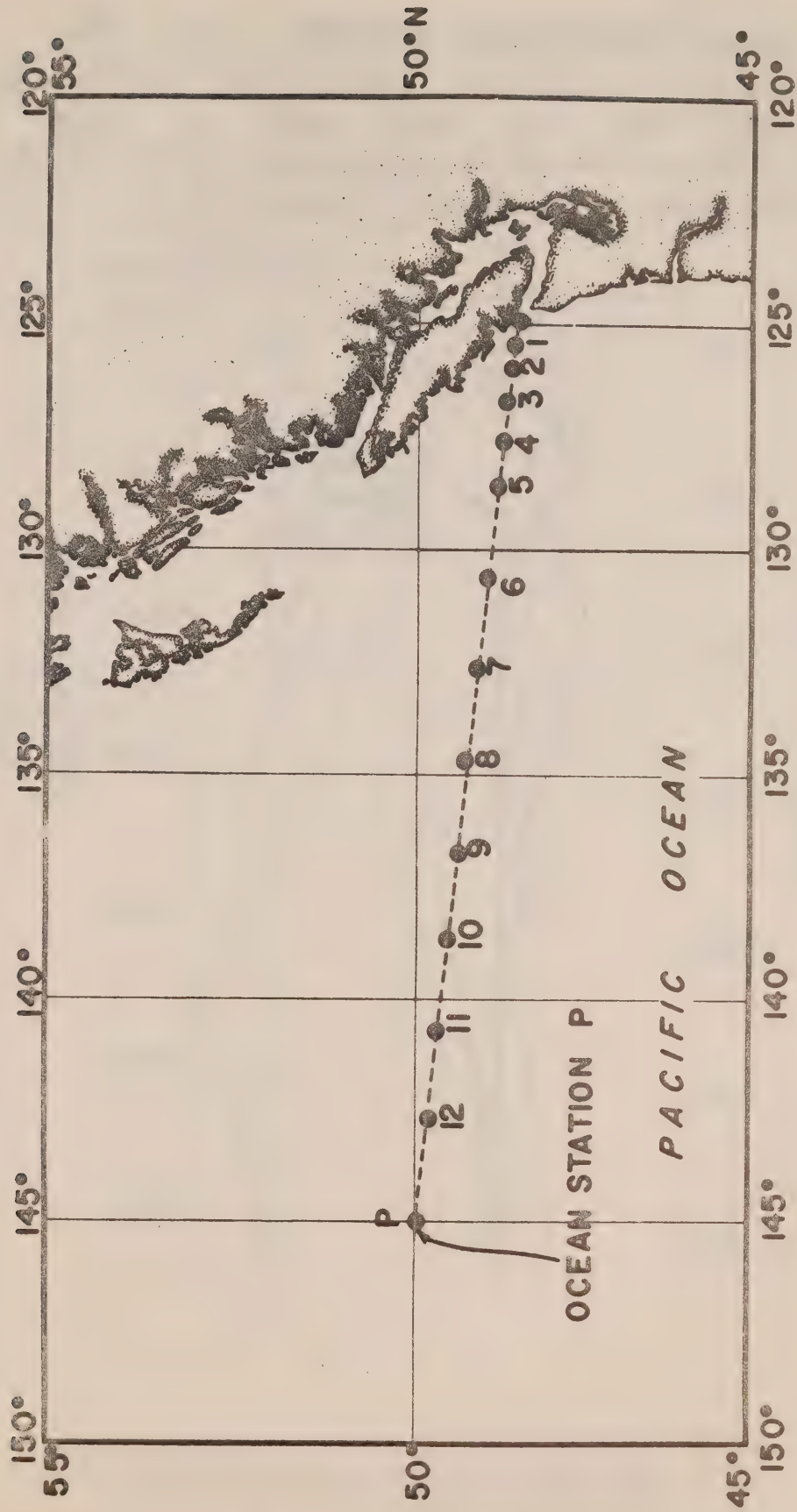


Fig. 1 Chart showing Line P station positions.

SALINITY DIFFERENCE , NANSEN - S.T.D. ‰

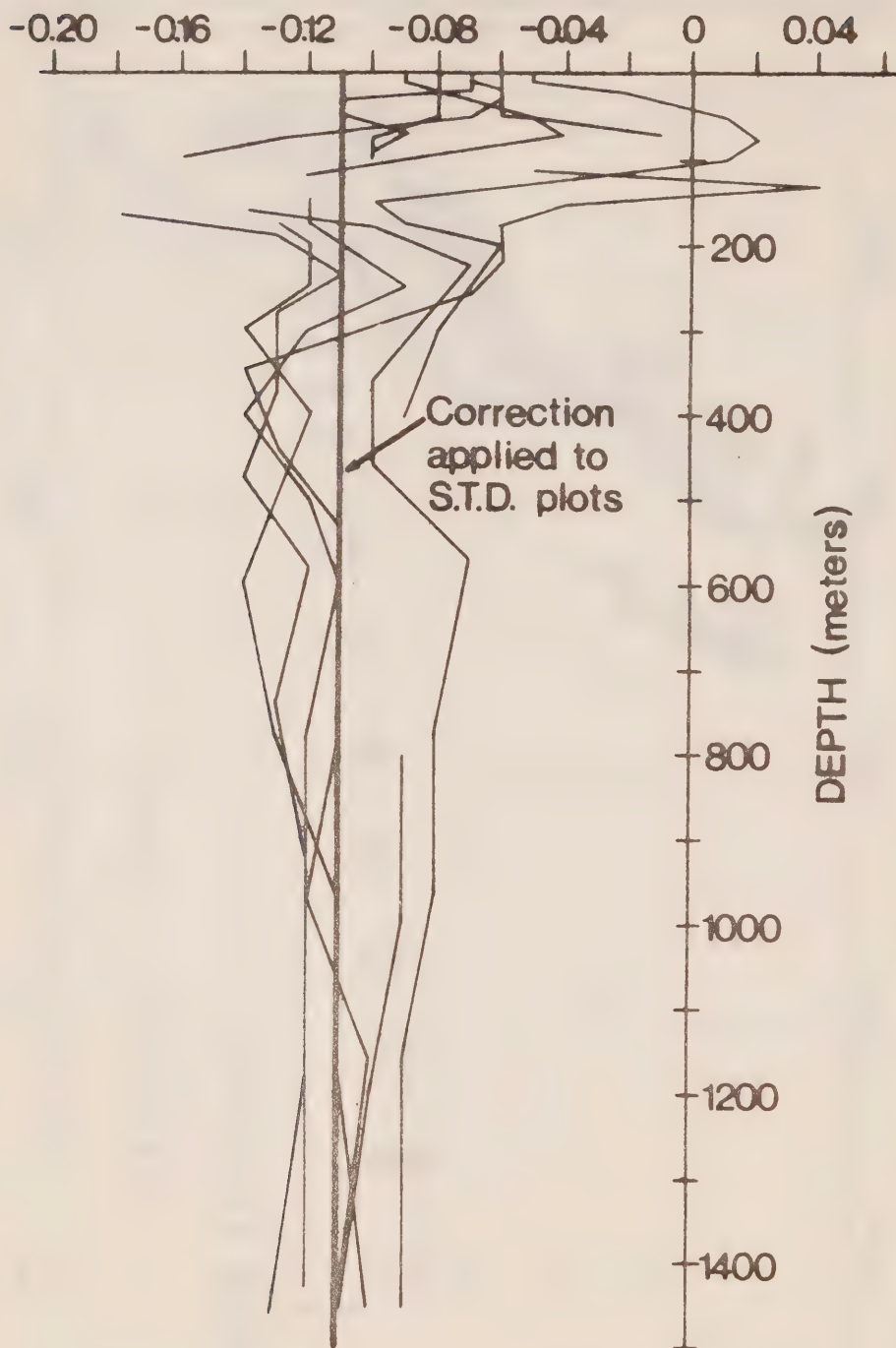


Fig. 2 Profiles of salinity difference between samples obtained from bottles and data from a Bissett-Berman Model 9006 S.T.D. (Serial No. 5018). REFERENCE NO. 70-005.

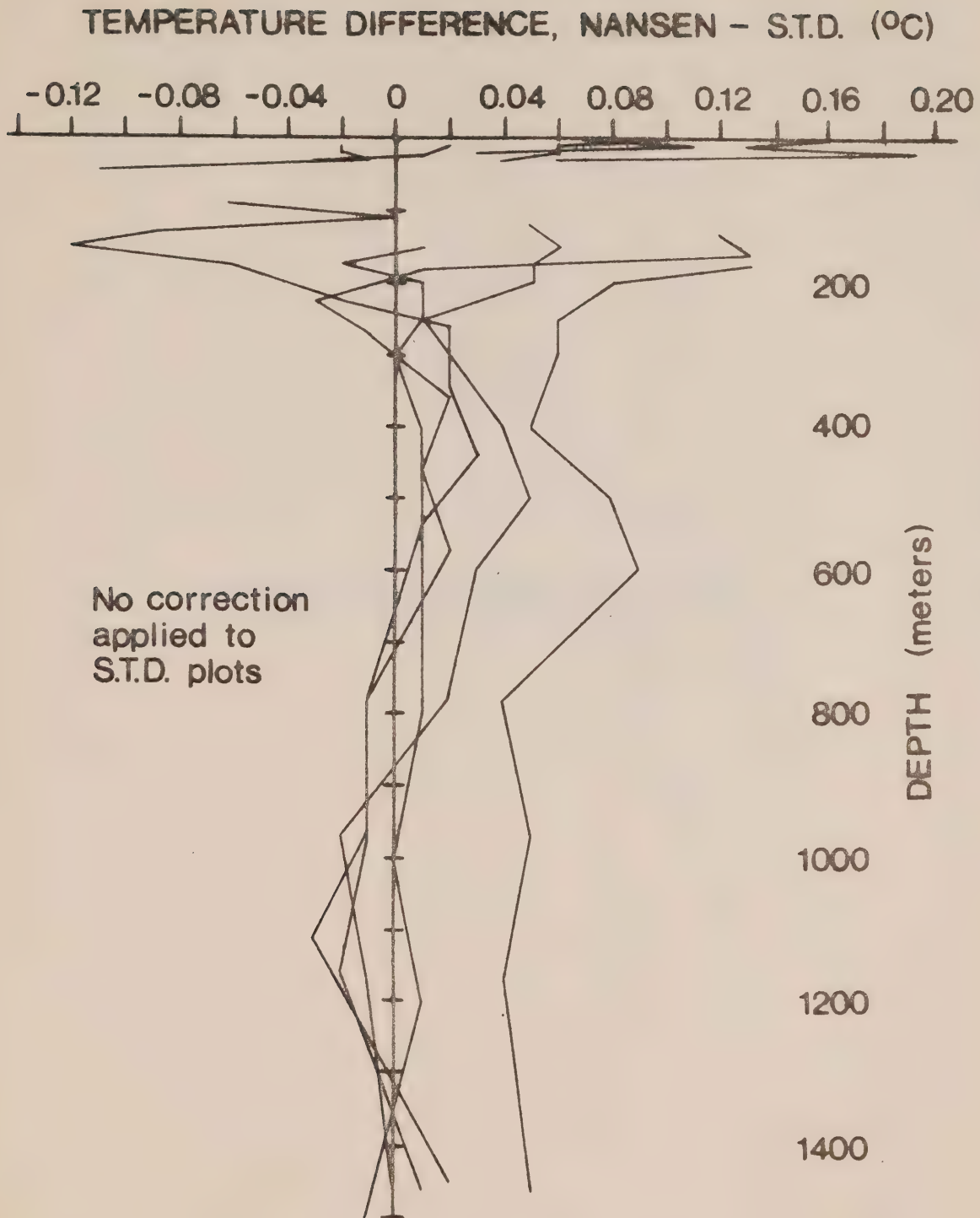


Fig. 3 Profiles of temperature difference between reversing thermometers and data from a Bissett-Berman Model 9006 S.T.D. (Serial No. 5018). REFERENCE NO. 70-005.





COMPOSITE PLOTS OF TEMPERATURE, SALINITY  
AND DISSOLVED OXYGEN VS. DEPTH

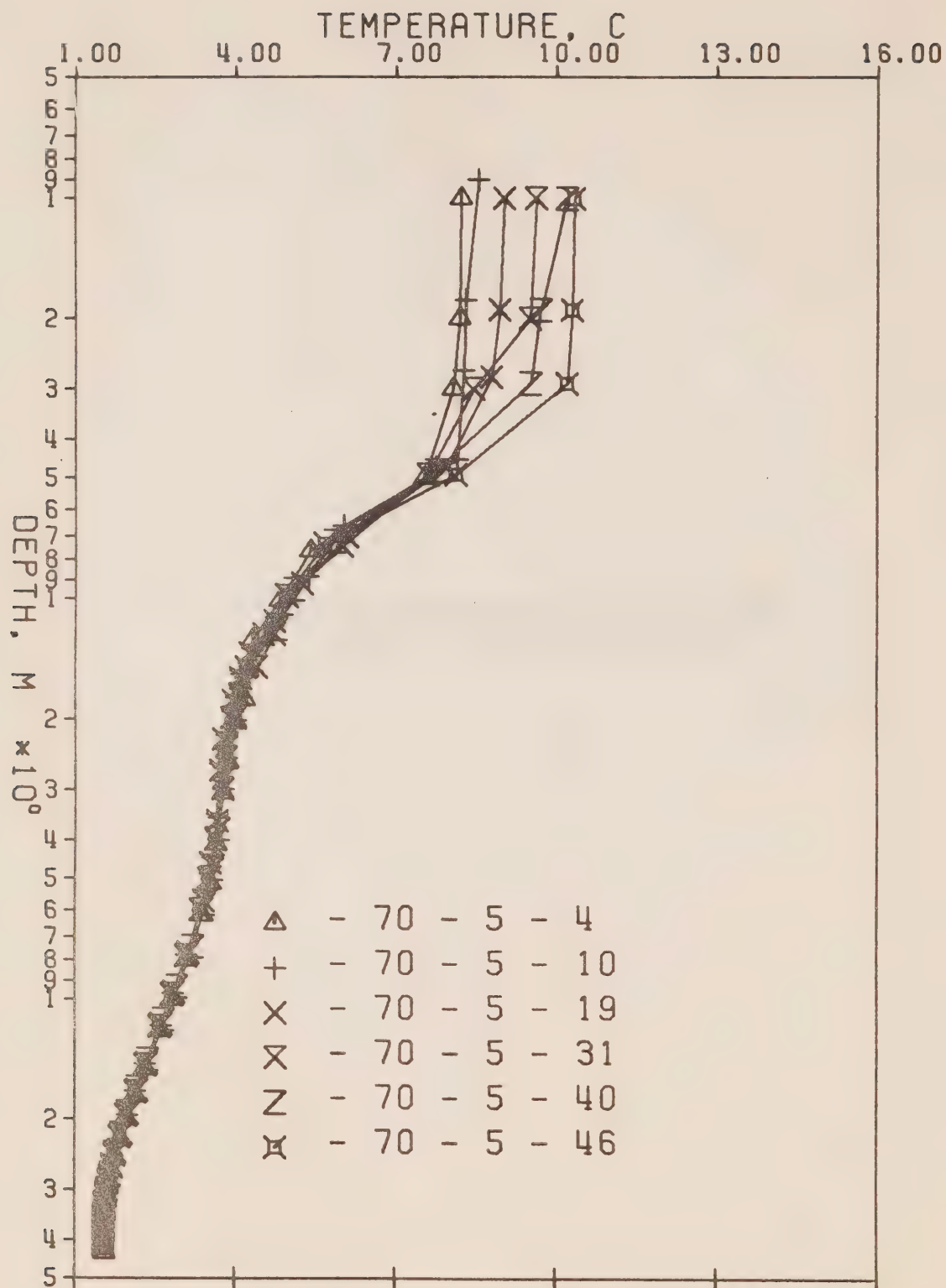


Figure 4 Composite plot of temperature vs log<sub>10</sub> depth.

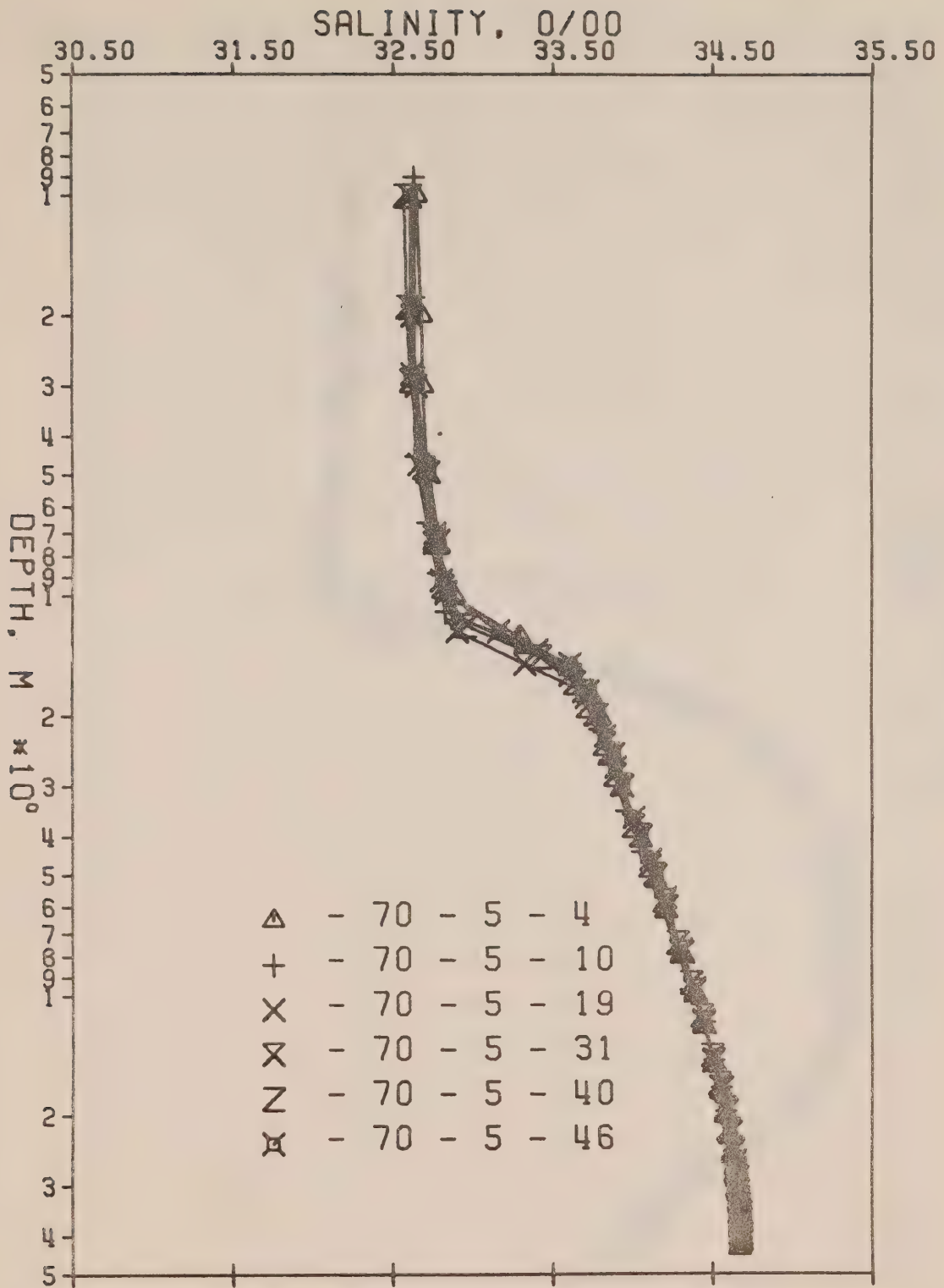


Figure 5 Composite plot of salinity vs log<sub>10</sub> depth.

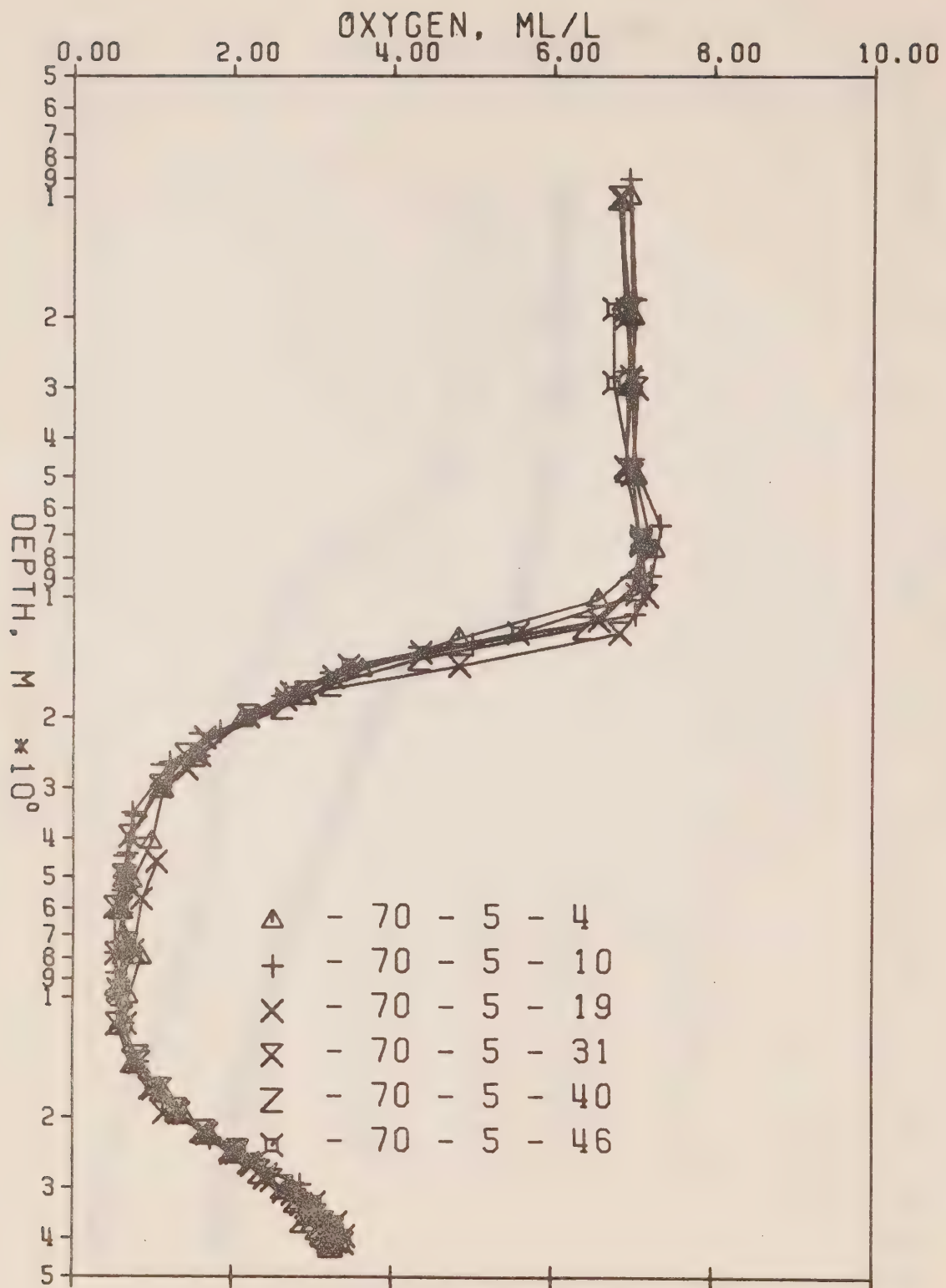
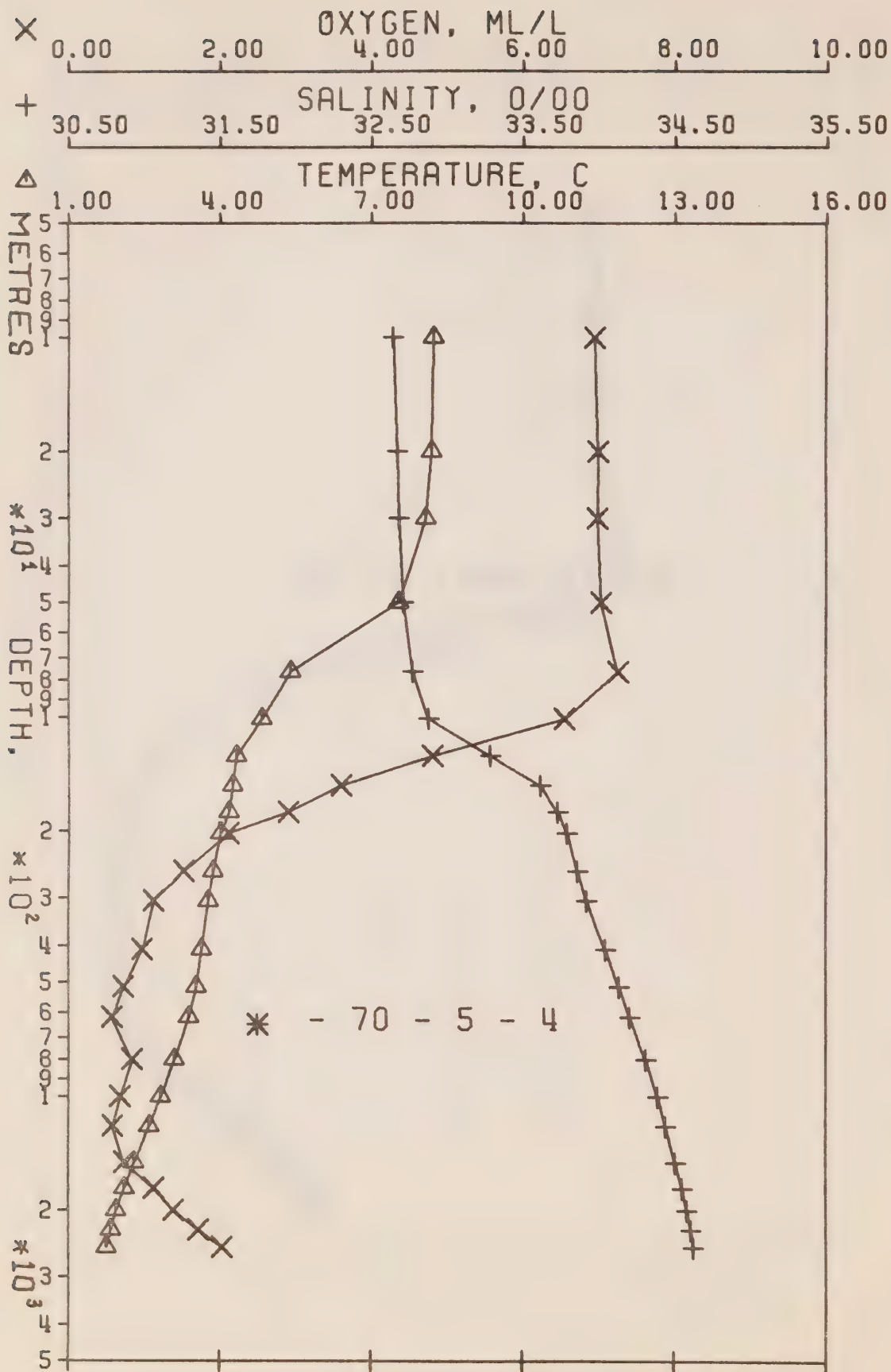


Figure 6 Composite plot of oxygen vs  $\log_{10}$  depth.



RESULTS OF NANSEN BOTTLE CASTS



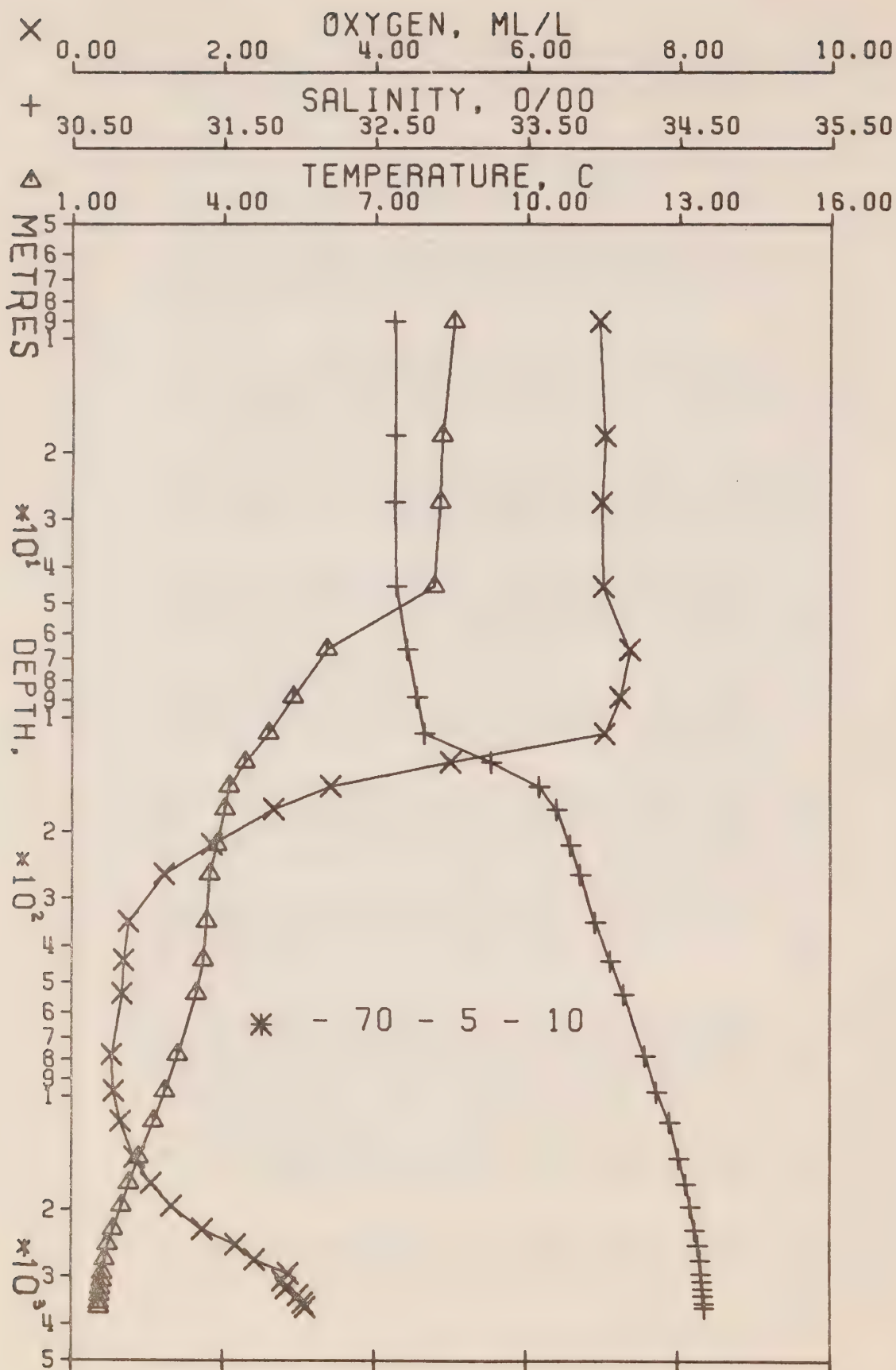
PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 5- 4 DATE 1/ 7/70

POSITION 50- 0.0 N. 145- 0.0 W GMT 18.7

HYDROGRAPHIC CAST DATA

PRFSS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	POT. FN	OXY	SOUND
0	8.31	32.646	0	25.406	258.3	8.31	258.0	0.0	0.0	6.91	1481.
10	8.22	32.647	10	25.420	257.2	8.22	256.7	0.26	0.01	6.94	1481.
20	8.18	32.677	20	25.450	254.5	8.18	253.9	0.52	0.05	6.99	1481.
30	8.06	32.687	30	25.475	252.2	8.06	251.5	0.77	0.12	6.98	1481.
50	7.52	32.715	50	25.574	243.0	7.52	242.0	1.27	0.32	7.03	1479.
76	5.40	32.780	76	25.897	212.4	5.39	211.4	1.87	0.71	7.26	1471.
102	4.83	32.883	101	26.043	198.7	4.82	197.5	2.39	1.18	6.55	1469.
128	4.31	33.282	127	26.420	163.0	4.30	161.6	2.86	1.73	4.81	1468.
153	4.24	33.618	152	26.688	137.8	4.23	136.2	3.24	2.27	3.60	1469.
179	4.17	33.736	178	26.789	128.5	4.16	126.6	3.59	2.86	2.90	1469.
204	4.00	33.795	203	26.853	122.6	3.99	120.5	3.90	3.47	2.11	1469.
257	3.95	33.866	255	26.925	116.1	3.83	113.7	4.52	4.94	1.52	1469.
308	3.76	33.926	306	26.981	111.1	3.74	108.3	5.11	6.62	1.12	1469.
413	3.63	34.051	410	27.094	101.3	3.60	97.6	6.22	10.71	0.97	1471.
518	3.52	34.140	514	27.175	94.2	3.48	89.8	7.24	15.57	0.72	1472.
622	3.37	34.208	617	27.244	88.3	3.33	83.2	8.19	21.09	0.57	1473.
808	3.08	34.314	801	27.355	78.6	3.02	72.6	9.74	32.38	0.84	1475.
1010	2.81	34.397	1000	27.446	70.9	2.74	63.9	11.24	46.27	0.68	1479.
1211	2.59	34.445	1199	27.503	66.1	2.51	58.4	12.62	61.87	0.58	1480.
1514	2.29	34.512	1497	27.582	59.3	2.19	50.8	14.51	88.12	0.74	1484.
1769	2.09	34.556	1748	27.633	54.9	1.97	45.9	15.96	112.42	1.13	1487.
2024	1.93	34.586	1999	27.670	51.8	1.79	42.2	17.32	138.67	1.39	1491.
2281	1.92	34.608	2252	27.696	49.8	1.66	39.6	18.62	167.33	1.72	1495.
2542	1.73	34.627	2508	27.718	48.2	1.55	37.4	19.90	198.74	2.03	1499.





# PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 5- 10 DATE 9/ 7/70

POSITION 50- 0.0 N, 145- 0.0 W GMT 19.2

## HYDROGRAPHIC CAST DATA

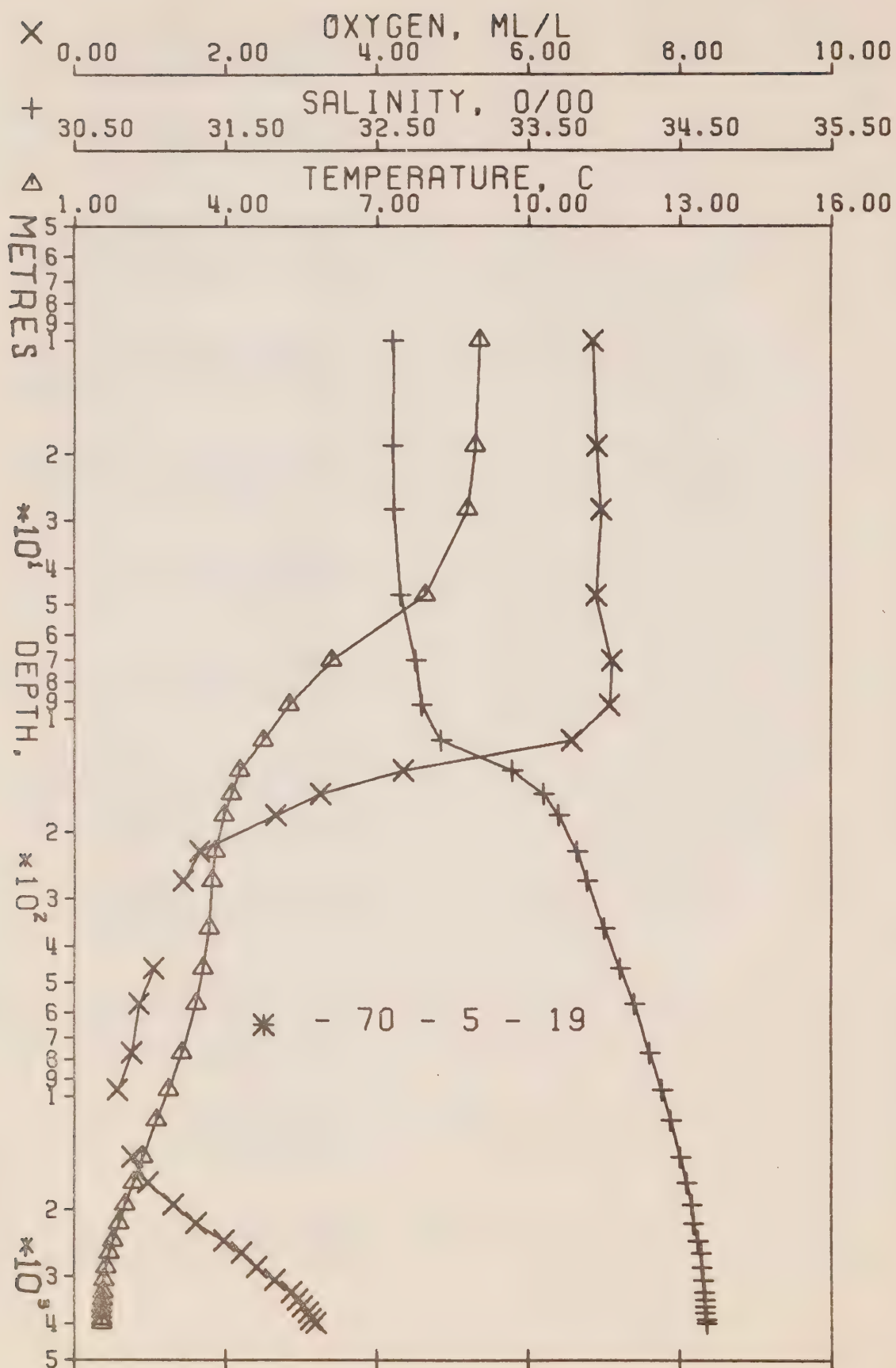
PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	POT. EN	OXY	SOUND
0	8.65	32.632	0	25.344	264.2	8.65	263.9	0.0	0.0	7.05	1482.
9	8.55	32.629	9	25.357	263.1	8.55	262.8	0.24	0.01	6.95	1482.
18	8.30	32.630	18	25.395	259.6	8.30	259.1	0.48	0.04	7.02	1481.
27	8.28	32.629	27	25.397	259.6	8.28	258.9	0.71	0.10	6.98	1481.
45	8.16	32.638	45	25.422	257.5	8.16	256.5	1.18	0.27	7.00	1481.
66	6.03	32.715	66	25.770	224.4	6.02	223.4	1.69	0.56	7.35	1473.
89	5.37	32.779	88	25.900	212.3	5.36	211.1	2.17	0.94	7.22	1471.
111	4.88	32.832	110	25.997	203.1	4.87	201.8	2.64	1.41	7.02	1469.
132	4.42	33.271	131	26.394	165.5	4.41	164.1	3.03	1.90	4.99	1468.
153	4.10	33.584	152	26.676	138.9	4.09	137.4	3.35	2.36	3.41	1468.
175	4.01	33.700	174	26.777	129.5	4.00	127.8	3.64	2.85	2.66	1468.
218	3.85	33.792	216	26.866	121.3	3.83	119.3	4.17	3.91	1.84	1463.
261	3.72	33.855	259	26.929	115.6	3.70	113.3	4.68	5.16	1.21	1468.
349	3.66	33.954	346	27.014	108.3	3.64	105.2	5.66	8.21	0.74	1470.
442	3.59	34.054	438	27.100	100.8	3.56	97.0	6.63	12.11	0.68	1471.
541	3.46	34.143	536	27.183	93.6	3.42	89.0	7.59	16.92	0.66	1472.
785	3.08	34.286	778	27.333	80.6	3.03	74.7	9.71	31.20	0.52	1475.
980	2.83	34.359	971	27.414	73.7	2.76	67.0	11.21	44.75	0.55	1477.
1177	2.60	34.444	1165	27.502	66.1	2.52	58.6	12.58	59.81	0.64	1479.
1473	2.31	34.506	1457	27.576	59.7	2.21	51.4	14.43	84.80	0.83	1483.
1724	2.13	34.549	1704	27.625	55.7	2.01	46.6	15.87	108.33	1.05	1487.
1979	1.97	34.580	1955	27.662	52.6	1.83	43.0	17.25	134.37	1.32	1490.
2278	1.81	34.610	2249	27.699	49.5	1.65	39.4	18.78	167.47	1.73	1495.
2509	1.71	34.632	2475	27.724	47.4	1.53	36.9	19.89	194.65	2.17	1498.
2744	1.64	34.643	2706	27.738	46.5	1.44	35.4	21.00	224.21	2.42	1502.
2583	1.60	34.651	2940	27.747	46.0	1.38	34.4	22.10	256.44	2.86	1506.
3128	1.58	34.656	3082	27.753	45.9	1.35	33.8	22.77	277.23	2.78	1508.
3276	1.56	34.662	3226	27.759	45.6	1.31	33.2	23.44	299.20	2.83	1510.
3425	1.54	34.662	3372	27.760	45.8	1.28	32.9	24.12	322.50	2.99	1513.
3575	1.53	34.669	3519	27.767	45.5	1.25	32.2	24.81	347.00	3.05	1515.
3676	1.52	34.670	3617	27.768	45.5	1.23	32.0	25.27	363.88	3.08	1517.

## PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 5- 12 DATE 11/ 7/70  
 POSITION 50- 0.0 N, 145- 0.0 W GMT 0.8  
 HYDROGRAPHIC CAST DATA

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	POT. EN	OXY	SOUND
2301	1.80	34.614	2271	27.703	49.2	1.64	39.0	0.0	0.0	1.81	1495.
2372	1.70	34.631	2341	27.724	46.9	1.53	37.0	3.34	13.90	2.12	1496.
2442	1.78	34.611	2409	27.702	49.6	1.61	39.0	3.68	22.16	1.78	1497.
2517	1.71	34.702	2483	27.780	42.4	1.53	31.6	4.02	30.93	2.00	1498.
2608	1.67	34.633	2572	27.728	47.2	1.48	36.5	4.42	41.41	2.25	1500.
2724	1.64	34.642	2686	27.737	46.5	1.44	35.5	4.97	56.35	2.36	1501.
2810	1.62	34.644	2770	27.740	46.4	1.42	35.2	5.37	67.57	2.51	1503.
2910	1.60	34.651	2868	27.747	45.8	1.39	34.4	5.83	81.01	2.61	1504.
3027	1.58	34.647	2982	27.745	46.2	1.36	34.5	6.37	97.22	2.66	1506.
3162	1.56	34.653	3114	27.752	45.9	1.32	33.9	6.99	116.83	2.73	1509.
3263	1.56	34.656	3213	27.754	46.0	1.31	33.6	7.46	132.06	2.79	1510.







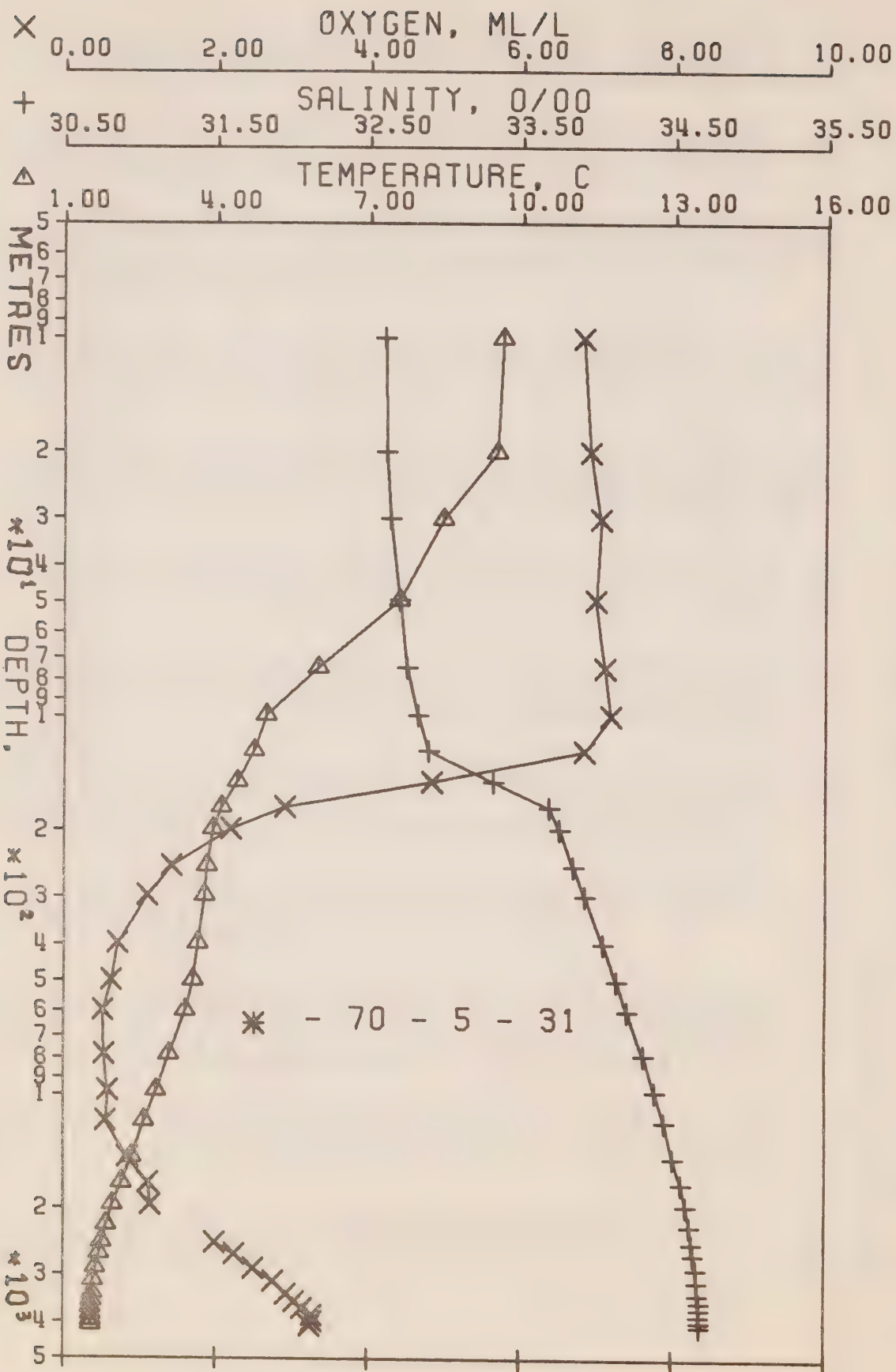
PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 5- 19 DATE 14/ 7/70

POSITION 50- 0.0 N, 145- 0.0 W GMT 20.5

HYDROGRAPHIC CAST DATA

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	POT. EN	OXY	SOUND
0	9.02	32.611	0	25.271	271.1	9.02	270.9	0.0	0.0	6.91	1484.
10	9.03	32.610	10	25.268	271.6	9.03	271.2	0.27	0.01	6.85	1484.
19	8.94	32.607	19	25.280	270.7	8.94	270.0	0.52	0.05	6.90	1484.
28	8.79	32.615	28	25.309	268.0	8.79	267.2	0.76	0.11	6.96	1483.
47	7.95	32.662	47	25.471	252.8	7.95	251.3	1.26	0.30	6.89	1480.
70	6.08	32.758	70	25.798	221.8	6.07	220.8	1.81	0.63	7.10	1474.
93	5.25	32.799	92	25.929	209.5	5.24	208.3	2.29	1.03	7.07	1471.
115	4.74	32.929	114	26.089	194.4	4.73	193.1	2.74	1.50	6.57	1469.
138	4.27	33.402	137	26.514	154.2	4.26	152.8	3.14	2.02	4.35	1468.
159	4.11	33.605	158	26.691	137.6	4.10	135.9	3.45	2.48	3.25	1468.
181	3.96	33.707	180	26.787	128.6	3.95	126.8	3.74	2.99	2.66	1468.
226	3.77	33.827	224	26.902	118.0	3.75	115.9	4.28	4.12	1.65	1468.
270	3.71	33.890	268	26.958	113.0	3.69	110.5	4.79	5.41	1.43	1469.
362	3.65	34.007	359	27.057	104.3	3.63	101.1	5.79	8.62	0.0	1470.
462	3.54	34.112	458	27.151	96.1	3.51	92.1	6.79	12.81	1.04	1471.
573	3.40	34.205	568	27.238	88.5	3.36	83.8	7.81	18.21	0.85	1473.
776	3.11	34.305	769	27.345	79.5	3.06	73.5	9.51	29.89	0.75	1475.
572	2.84	34.385	963	27.434	71.8	2.77	65.1	10.99	43.09	0.56	1477.
1169	2.61	34.439	1157	27.497	66.5	2.53	59.0	12.35	57.88	0.0	1479.
1465	2.33	34.504	1449	27.572	60.1	2.23	51.7	14.22	82.95	0.76	1483.
1712	2.15	34.544	1692	27.619	56.3	2.03	47.2	15.65	106.16	0.97	1487.
1958	1.99	34.580	1934	27.661	52.7	1.86	43.1	16.99	131.14	1.31	1490.
2205	1.87	34.591	2177	27.679	51.4	1.72	41.3	18.27	158.44	1.61	1494.
2452	1.75	34.619	2419	27.710	48.7	1.58	38.2	19.51	187.75	1.98	1497.
2637	1.68	34.639	2601	27.732	47.0	1.49	36.1	20.39	210.74	2.21	1500.
2877	1.62	34.647	2836	27.742	46.3	1.41	34.9	21.51	242.11	2.41	1504.
3118	1.57	34.655	3072	27.753	45.8	1.34	33.8	22.62	276.00	2.65	1508.
3363	1.55	34.660	3311	27.758	45.8	1.29	33.2	23.74	312.99	2.87	1512.
3510	1.54	34.666	3455	27.764	45.6	1.27	32.5	24.41	336.59	2.95	1514.
3659	1.53	34.666	3601	27.764	46.0	1.24	32.4	25.10	361.61	3.01	1517.
3809	1.53	34.667	3747	27.765	46.3	1.23	32.2	25.79	387.91	3.09	1519.
3961	1.53	34.676	3895	27.772	46.0	1.21	31.4	26.49	415.63	3.12	1522.
4062	1.53	34.674	3994	27.771	46.5	1.20	31.5	26.96	434.83	3.19	1524.



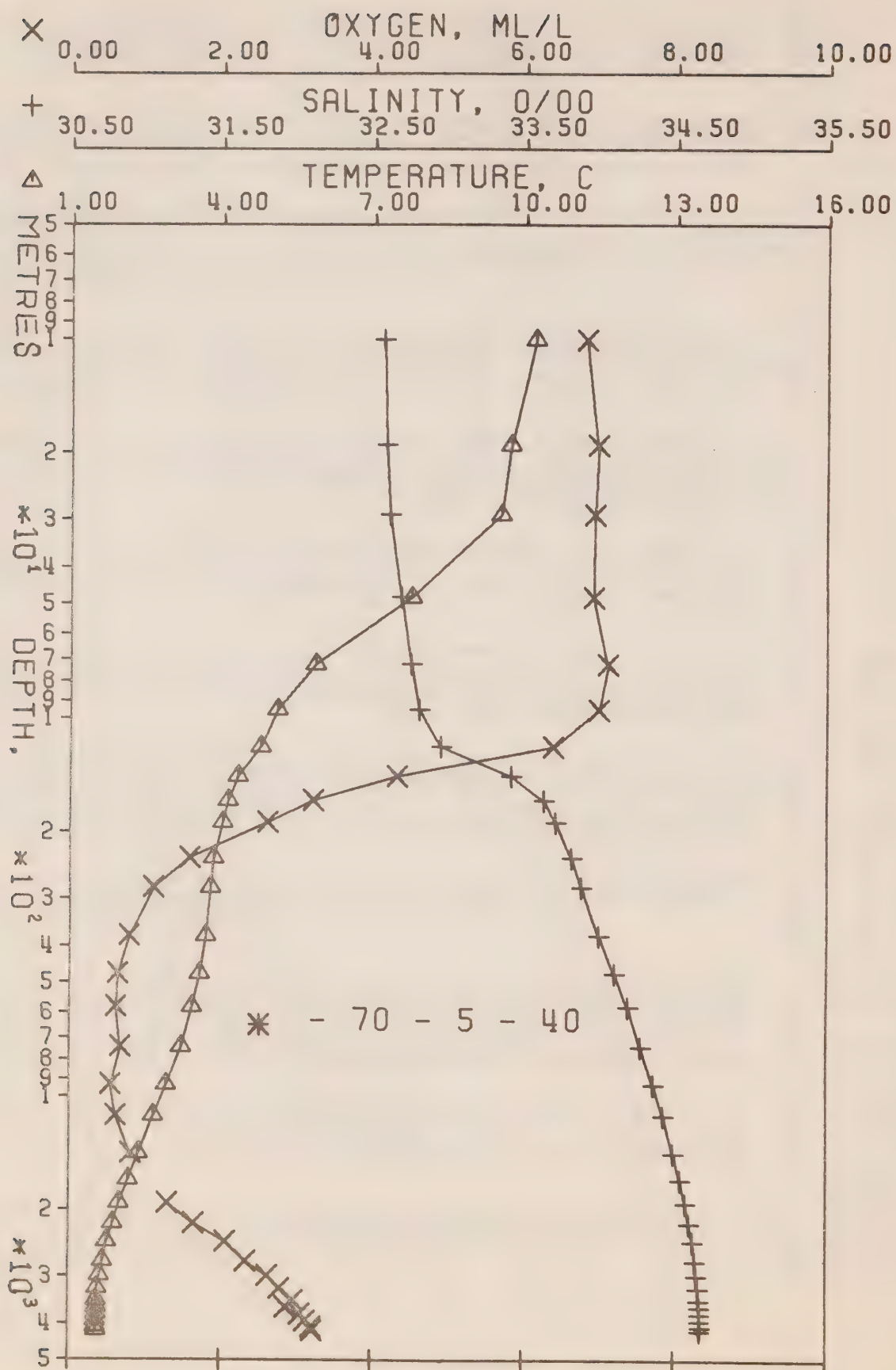
PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 5- 31 DATE 22/ 7/70

POSITION 50- 0.0 N, 145- 0.0 W GMT 20.6

HYDROGRAPHIC CAST DATA

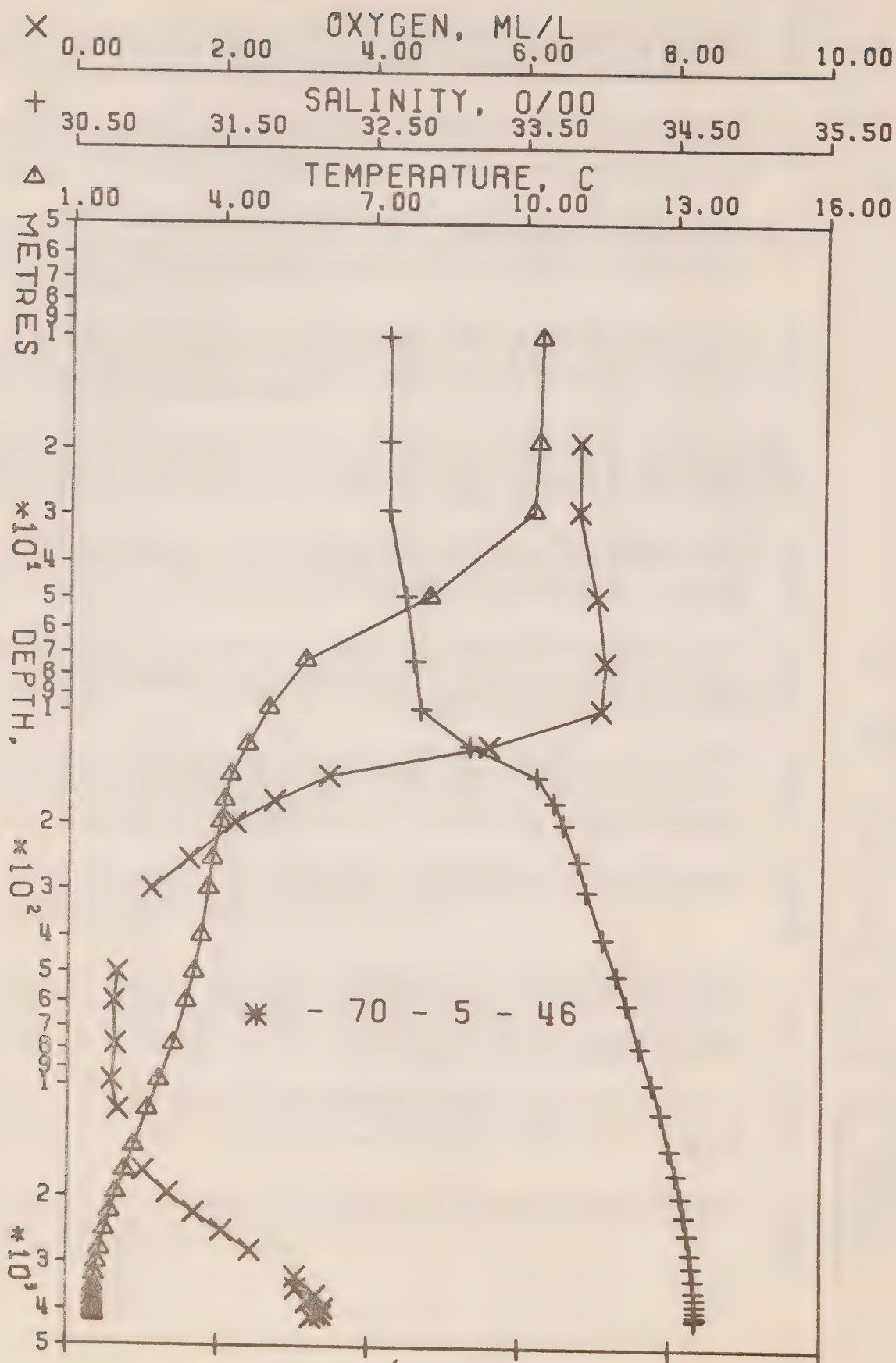
PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	POT. EN	OXY	SOUND
0	9.67	32.608	0	25.165	281.3	9.67	281.1	0.0	0.0	6.85	1486.
10	9.63	32.612	10	25.174	280.5	9.63	280.1	0.28	0.01	6.81	1486.
20	9.50	32.614	20	25.197	278.6	9.50	277.9	0.56	0.06	6.90	1486.
30	8.46	32.645	30	25.383	261.0	8.46	260.2	0.84	0.13	7.04	1482.
49	7.60	32.710	49	25.559	244.5	7.60	243.4	1.32	0.32	6.98	1479.
74	5.99	32.753	74	25.805	221.2	5.99	220.1	1.90	0.69	7.10	1473.
100	4.97	32.828	99	25.984	204.3	4.96	203.1	2.44	1.16	7.18	1470.
124	4.74	32.900	123	26.066	196.6	4.73	195.2	2.92	1.72	6.83	1469.
149	4.41	33.324	148	26.437	161.6	4.40	160.0	3.38	2.35	4.83	1469.
174	4.09	33.691	173	26.762	131.0	4.08	129.2	3.74	2.95	2.90	1468.
199	3.93	33.761	198	26.833	124.4	3.92	122.4	4.06	3.56	2.19	1468.
250	3.81	33.852	248	26.918	116.7	3.79	114.3	4.66	4.94	1.41	1469.
299	3.76	33.927	297	26.982	111.0	3.74	108.2	5.23	6.51	1.09	1469.
400	3.63	34.047	397	27.090	101.4	3.60	97.9	6.29	10.32	0.70	1471.
501	3.53	34.134	497	27.169	94.6	3.50	90.4	7.28	14.86	0.62	1472.
602	3.39	34.205	597	27.239	88.7	3.35	83.7	8.21	20.06	0.51	1473.
788	3.07	34.314	781	27.356	78.4	3.02	72.5	9.76	31.02	0.53	1475.
984	2.82	34.388	975	27.438	71.5	2.75	64.7	11.22	44.28	0.58	1477.
1182	2.58	34.450	1170	27.508	65.4	2.50	57.9	12.57	59.16	0.55	1479.
1480	2.32	34.505	1464	27.574	60.0	2.22	51.5	14.43	84.47	0.84	1483.
1730	2.12	34.558	1710	27.633	55.0	2.00	45.9	15.87	107.92	1.11	1487.
1982	1.95	34.591	1958	27.673	51.6	1.81	42.0	17.21	133.24	1.14	1490.
2237	1.83	34.613	2208	27.699	49.5	1.67	39.3	18.49	160.82	0.0	1494.
2494	1.74	34.630	2461	27.720	47.9	1.56	37.2	19.74	191.04	1.99	1498.
2673	1.69	34.640	2636	27.732	47.2	1.50	36.1	20.59	213.40	2.25	1501.
2917	1.62	34.659	2875	27.752	45.6	1.41	34.0	21.72	245.59	2.50	1505.
3165	1.57	34.666	3118	27.761	45.2	1.33	33.0	22.84	280.44	2.76	1509.
3418	1.55	34.671	3365	27.767	45.2	1.29	32.3	23.99	318.78	2.93	1513.
3572	1.54	34.679	3516	27.774	44.9	1.26	31.6	24.68	343.58	3.04	1515.
3729	1.53	34.678	3669	27.774	45.2	1.24	31.5	25.39	369.84	3.14	1518.
3887	1.52	34.677	3823	27.774	45.6	1.21	31.3	26.11	397.67	3.27	1521.
4048	1.52	34.682	3980	27.778	45.7	1.19	30.8	26.84	427.34	3.27	1524.
4158	1.53	34.679	4087	27.775	46.4	1.19	31.0	27.34	448.47	3.24	1526.





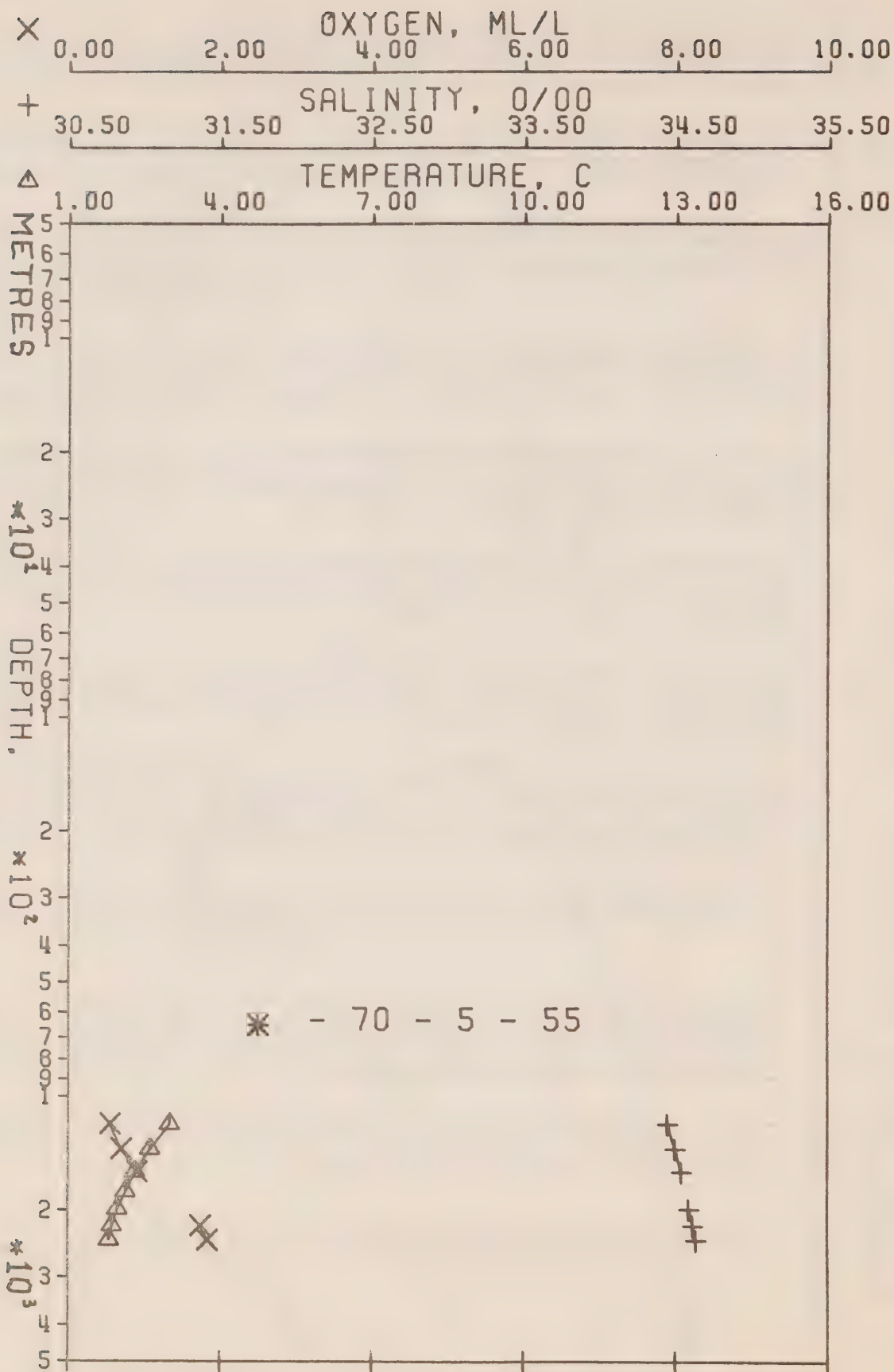
PACIFIC OCEANOGRAPHIC GROUP  
REFERENCE NO. 70- 5- 40 DATE 29/ 7/70  
POSITION 50- 0.0 N, 145- 0.0 W GMT 9.4  
HYDROGRAPHIC CAST DATA

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	POT. EN	OXY	SOUND
0	10.23	32.574	0	25.045	292.6	10.23	292.4	0.0	0.0	6.84	1488.
10	10.20	32.571	10	25.048	292.6	10.20	292.2	0.29	0.02	6.81	1488.
19	9.70	32.587	19	25.143	283.7	9.70	283.1	0.56	0.05	6.96	1487.
29	9.52	32.608	29	25.189	279.5	9.52	278.7	0.84	0.12	6.92	1486.
48	7.75	32.690	48	25.522	248.0	7.75	247.0	1.35	0.32	6.91	1480.
72	5.84	32.757	72	25.827	219.1	5.83	218.1	1.91	0.67	7.10	1473.
96	5.10	32.812	95	25.957	206.9	5.09	205.7	2.40	1.09	6.98	1470.
120	4.76	32.954	119	26.106	192.8	4.75	191.4	2.88	1.62	6.38	1469.
143	4.32	33.419	142	26.522	153.5	4.31	152.0	3.29	2.16	4.32	1468.
166	4.12	33.633	165	26.712	135.6	4.11	133.9	3.62	2.68	3.21	1468.
189	4.01	33.717	188	26.790	128.4	4.00	126.4	3.92	3.23	2.61	1468.
236	3.84	33.818	234	26.888	119.5	3.82	117.2	4.49	4.47	1.58	1468.
282	3.78	33.883	280	26.945	114.3	3.76	111.7	5.03	5.90	1.10	1469.
378	3.68	34.000	375	27.048	105.3	3.65	101.9	6.08	9.43	0.78	1470.
478	3.57	34.104	474	27.142	97.1	3.54	93.0	7.09	13.84	0.63	1472.
585	3.42	34.196	580	27.229	89.5	3.38	84.6	8.09	19.24	0.61	1473.
745	3.20	34.278	738	27.315	82.2	3.15	76.4	9.46	28.50	0.67	1475.
938	2.90	34.367	929	27.414	73.6	2.84	67.0	10.96	41.38	0.54	1477.
1133	2.65	34.430	1122	27.486	67.4	2.57	60.0	12.33	55.88	0.61	1479.
1432	2.35	34.497	1417	27.565	60.7	2.25	52.4	14.24	80.80	0.81	1483.
1684	2.15	34.540	1665	27.616	56.4	2.04	47.5	15.71	104.16	0.0	1486.
1940	1.98	34.574	1917	27.657	52.9	1.85	43.6	17.10	129.96	1.30	1490.
2199	1.86	34.600	2171	27.687	50.6	1.71	40.6	18.44	158.17	1.65	1493.
2461	1.74	34.626	2428	27.717	48.1	1.57	37.6	19.73	188.78	2.07	1497.
2773	1.66	34.638	2734	27.732	47.2	1.46	36.0	21.21	228.36	2.34	1502.
3027	1.60	34.650	2983	27.746	46.3	1.38	34.4	22.40	263.49	2.63	1506.
3281	1.55	34.662	3231	27.760	45.4	1.30	33.1	23.56	300.80	2.79	1511.
3536	1.54	34.667	3480	27.764	45.6	1.27	32.5	24.72	341.06	2.97	1515.
3688	1.54	34.671	3629	27.768	45.8	1.25	32.0	25.42	366.73	2.87	1517.
3841	1.54	34.671	3778	27.768	46.2	1.23	31.9	26.12	393.69	3.06	1520.
3995	1.53	34.670	3928	27.768	46.5	1.21	31.8	26.84	422.20	3.13	1523.
4148	1.53	34.674	4077	27.771	46.7	1.19	31.5	27.55	451.74	3.21	1525.
4250	1.54	34.670	4177	27.767	47.4	1.19	31.7	28.03	472.41	3.22	1527.



PACIFIC OCEANOGRAPHIC GROUP  
REFERENCE NO. 70- 5- 46 DATE 6/ 8/70  
POSITION 50- 0.0 N, 145- 0.0 W GMT 20.2  
HYDROGRAPHIC CAST DATA

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA C	PCT. EN	OXY	SOUND
0	10.37	32.607	0	25.047	292.5	10.37	292.3	0.0	0.0	6.72	1489.
10	10.33	32.606	10	25.053	292.0	10.33	291.6	0.29	0.02	0.0	1489.
19	10.29	32.607	19	25.061	291.5	10.29	290.9	0.56	0.05	6.74	1489.
29	10.19	32.611	29	25.081	289.8	10.19	289.0	0.85	0.13	6.74	1488.
49	8.13	32.725	49	25.494	250.7	8.13	249.6	1.40	0.34	6.98	1481.
73	5.67	32.785	73	25.869	215.1	5.66	214.0	1.96	0.69	7.09	1472.
99	4.95	32.829	98	25.987	204.0	4.94	202.8	2.48	1.16	7.04	1470.
124	4.52	33.159	123	26.295	175.0	4.51	173.6	2.96	1.70	5.56	1469.
149	4.19	33.603	148	26.681	138.4	4.18	136.8	3.36	2.24	3.44	1468.
174	4.08	33.721	173	26.786	128.7	4.07	126.9	3.69	2.79	2.72	1468.
199	4.00	33.779	198	26.841	123.7	3.99	121.7	4.00	3.39	2.20	1468.
250	3.83	33.879	248	26.937	114.9	3.81	112.5	4.60	4.77	1.59	1469.
301	3.76	33.937	299	26.990	110.2	3.74	107.4	5.18	6.39	1.09	1469.
402	3.62	34.049	399	27.093	101.2	3.59	97.7	6.25	10.21	0.0	1471.
503	3.49	34.146	499	27.183	93.4	3.46	89.1	7.23	14.73	0.65	1472.
602	3.34	34.217	597	27.254	87.2	3.30	82.3	8.12	19.76	0.61	1473.
786	3.09	34.301	779	27.344	79.6	3.04	73.6	9.65	30.59	0.63	1475.
982	2.80	34.383	973	27.436	71.6	2.73	64.9	11.13	43.93	0.58	1477.
1179	2.57	34.441	1167	27.502	66.0	2.49	58.6	12.48	58.78	0.67	1479.
1475	2.30	34.502	1459	27.573	60.0	2.20	51.6	14.34	83.92	0.0	1483.
1725	2.12	34.547	1705	27.624	55.7	2.00	46.7	15.78	107.44	1.01	1487.
1977	1.96	34.575	1953	27.659	52.8	1.82	43.3	17.14	133.19	1.34	1490.
2233	1.84	34.598	2205	27.687	50.6	1.68	40.6	18.47	161.63	1.69	1494.
2493	1.73	34.621	2460	27.713	48.5	1.55	37.9	19.75	192.61	2.06	1498.
2806	1.64	34.642	2767	27.737	46.7	1.44	35.5	21.24	232.78	2.44	1503.
3054	1.58	34.650	3009	27.748	46.1	1.35	34.3	22.39	267.02	0.0	1507.
3304	1.54	34.658	3254	27.757	45.7	1.29	33.3	23.54	304.23	3.04	1511.
3558	1.53	34.665	3502	27.764	45.7	1.25	32.5	24.69	344.77	3.05	1515.
3712	1.52	34.669	3652	27.767	45.7	1.23	32.1	25.40	370.77	3.31	1518.
3868	1.52	34.668	3804	27.767	46.2	1.21	32.0	26.11	398.41	3.20	1520.
4026	1.52	34.669	3958	27.767	46.5	1.19	31.8	26.84	427.87	3.41	1523.
4158	1.52	34.669	4087	27.767	46.9	1.18	31.7	27.47	453.78	3.31	1525.
4185	1.52	34.675	4113	27.772	46.5	1.18	31.3	27.59	459.08	3.39	1526.



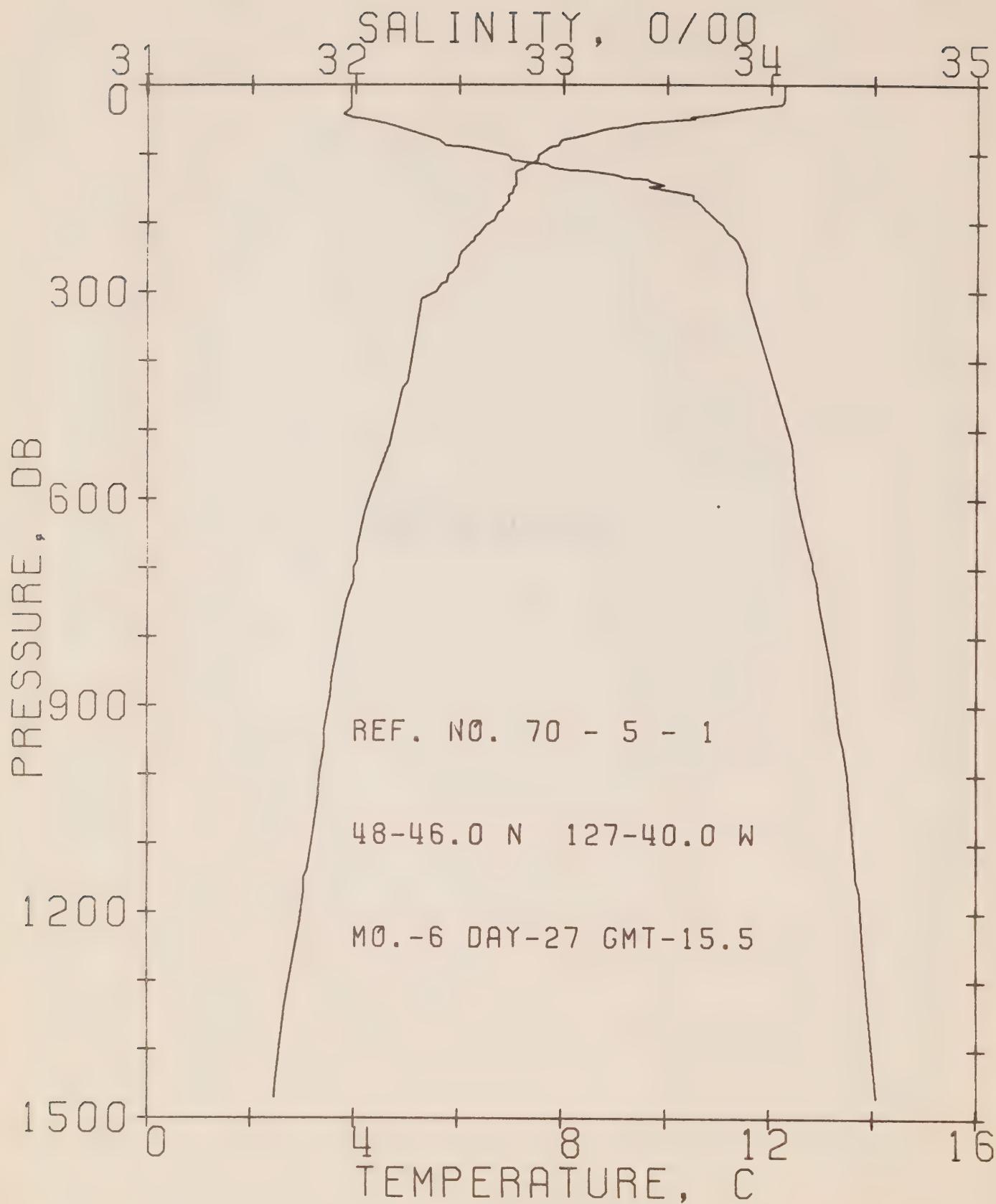


PACIFIC OCEANOGRAPHIC GROUP  
REFERENCE NO. 70- 5- 55 DATE 11/ 8/70  
POSITION 48-49.8 N, 127-41.8 W GMT 19.5  
HYDROGRAPHIC CAST DATA

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	POT. EN	OXY	SOUND
1195	3.00	34.448	1182	27.465	70.4	2.92	61.5	0.0	0.0	0.55	1481.
1395	2.60	34.500	1380	27.546	63.1	2.50	54.1	1.89	15.40	0.70	1483.
1597	2.30	34.538	1579	27.602	57.9	2.19	48.8	3.10	33.97	0.91	1485.
1801	2.12	34.567*	1780	27.640	54.6	2.00	45.1	4.25	53.82	0.0	1488.
2009	1.96	34.592	1984	27.673	51.7	1.82	41.9	5.35	75.20	0.0	1491.
2218	1.86	34.615	2190	27.699	49.6	1.71	39.4	6.41	98.04	1.75	1494.
2430	1.79	34.634	2398	27.719	48.1	1.62	37.3	7.44	122.52	1.84	1497.



## RESULTS OF STD CASTS





PACIFIC OCEANOGRAPHIC GROUP

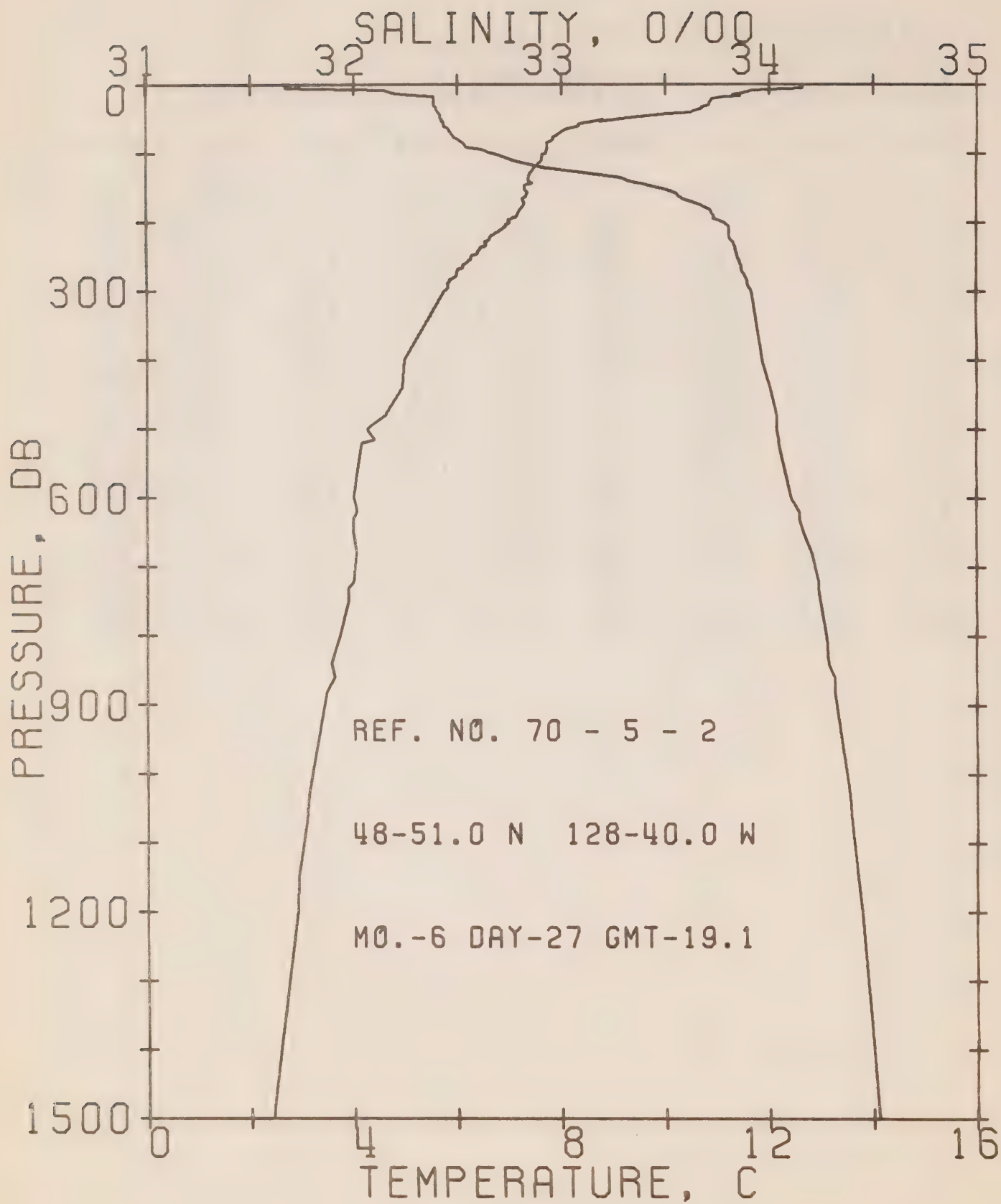
REFERENCE NO. 70- 5- I

DATE 27/ 6/70

POSITION 48-46.0N, 127-40.0W GMT 15.5

RESULTS OF STP CAST 75 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	12.28	31.98	0	24.22	371.1	0.0	0.0	1495.
10	12.28	31.98	10	24.22	371.5	0.37	0.02	1495.
20	12.28	31.98	20	24.22	371.8	0.74	0.08	1495.
30	12.08	31.98	30	24.26	368.4	1.11	0.17	1494.
50	10.40	32.06	50	24.61	334.7	1.82	0.46	1489.
75	8.32	32.36	75	25.18	280.8	2.58	0.94	1482.
100	7.59	32.71	99	25.56	245.3	3.24	1.52	1480.
125	7.12	33.12	124	25.95	208.6	3.82	2.19	1479.
150	7.06	33.45	149	26.21	183.8	4.30	2.86	1480.
175	6.89	33.67	174	26.41	165.4	4.72	3.57	1480.
200	6.62	33.76	199	26.52	155.7	5.13	4.33	1479.
225	6.31	33.84	224	26.62	146.1	5.50	5.15	1478.
250	6.03	33.88	248	26.69	139.6	5.86	6.01	1478.
300	5.59	33.89	298	26.75	134.1	6.54	7.93	1477.
400	5.11	33.99	397	26.89	122.0	7.81	12.43	1477.
500	4.76	34.09	496	27.01	111.4	8.98	17.77	1477.
600	4.31	34.14	595	27.09	103.8	10.05	23.78	1477.
800	3.72	34.27	793	27.26	88.8	11.97	37.41	1478.
1000	3.33	34.38	991	27.38	77.8	13.63	52.63	1480.
1200	2.98	34.45	1188	27.47	70.3	15.12	69.29	1481.



PACIFIC OCEANOGRAPHIC GROUP

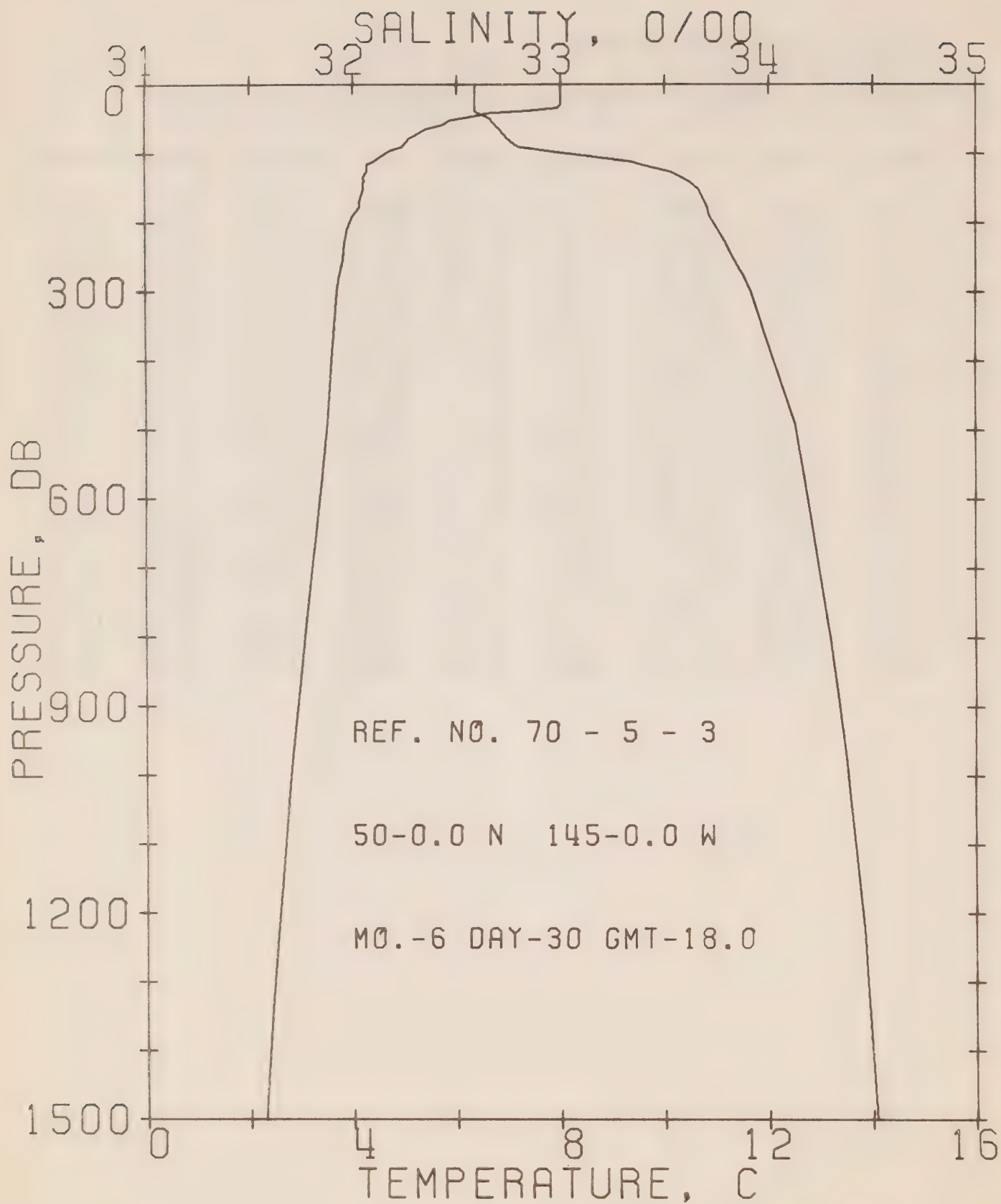
REFERENCE NO. 70- 5- 2

DATE 27/ 6/70

POSITION 48-51.0N, 128-40.0W GMT 19.1

RESULTS OF STP CAST 86 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	12.68	31.67	0	23.90	401.2	0.0	0.0	1496.
10	11.59	32.17	10	24.49	345.4	0.38	0.02	1493.
20	10.92	32.39	20	24.78	317.9	0.71	0.07	1491.
30	10.84	32.39	30	24.80	316.8	1.03	0.15	1491.
50	9.77	32.43	50	25.12	286.5	1.64	0.40	1484.
75	7.89	32.49	75	25.34	265.5	2.32	0.83	1480.
100	7.70	32.67	99	25.52	249.2	2.97	1.41	1480.
125	7.45	33.04	124	25.84	218.9	3.56	2.08	1480.
150	7.29	33.48	149	26.21	184.5	4.06	2.78	1481.
175	7.29	33.68	174	26.36	170.2	4.50	3.52	1481.
200	7.00	33.78	199	26.49	158.7	4.92	4.30	1481.
225	6.64	33.82	224	26.56	151.6	5.30	5.14	1480.
250	6.29	33.85	248	26.63	145.0	5.67	6.04	1479.
300	5.77	33.92	298	26.75	134.1	6.37	7.99	1478.
400	5.00	33.97	397	26.88	122.2	7.65	12.53	1476.
500	4.25	34.04	496	27.02	109.4	8.82	17.89	1475.
600	4.01	34.11	595	27.10	102.4	9.88	23.83	1476.
800	3.74	34.28	793	27.26	88.4	11.79	37.35	1478.
1000	3.20	34.38	991	27.39	76.7	13.43	52.40	1479.
1200	2.92	34.45	1188	27.48	69.3	14.89	68.69	1481.
1500	2.42	34.53	1484	27.59	59.4	16.82	95.03	1484.





PACIFIC OCEANOGRAPHIC GROUP

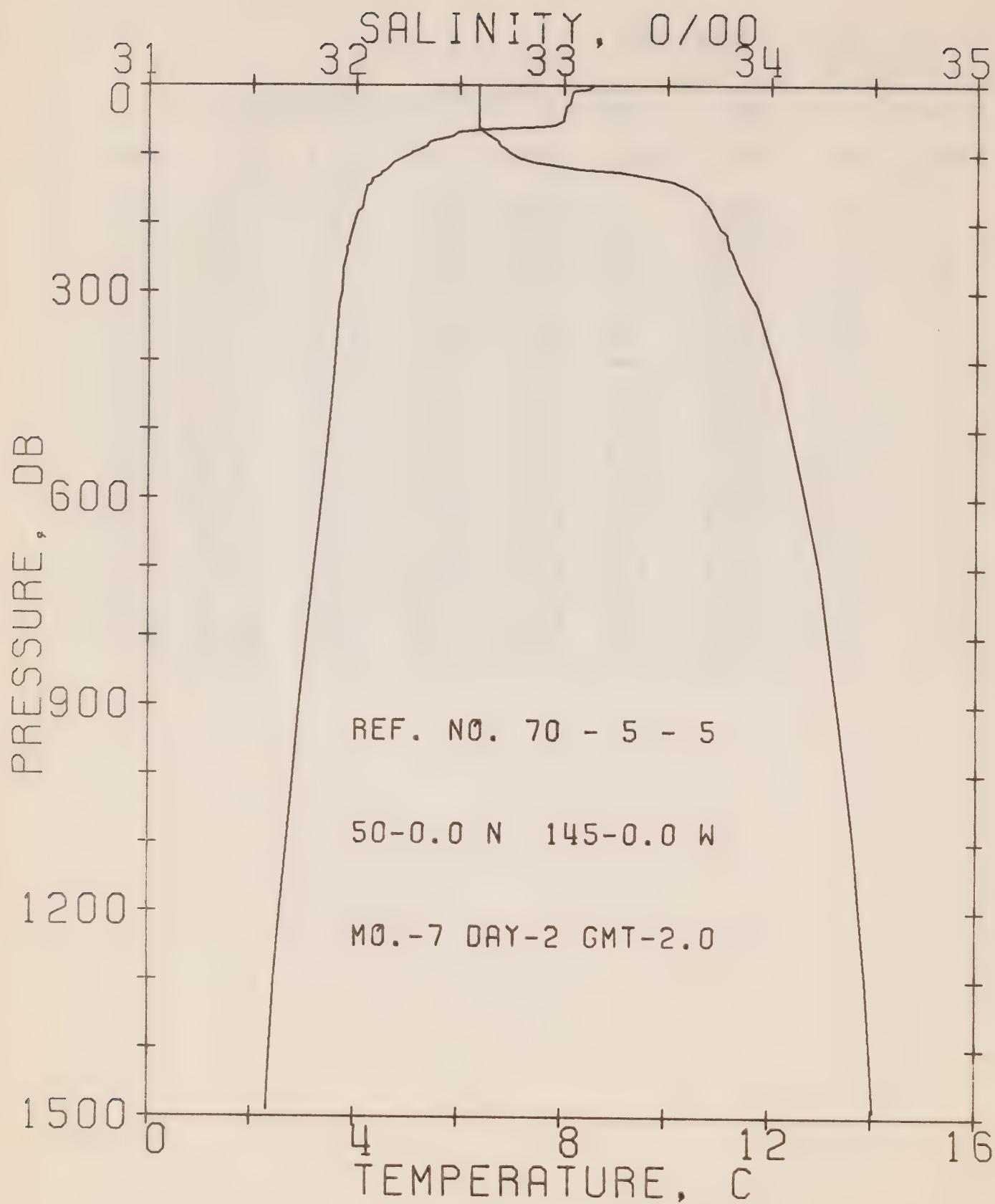
REFERENCE NO. 70- 5- 3

DATE 30/ 6/70

POSITION 50- 0.0N, 145- 0.0W GMT 18.0

RESULTS OF STD CAST 35 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.03	32.59	0	25.40	258.3	0.0	0.0	1480.
10	8.03	32.59	10	25.40	258.7	0.26	0.01	1480.
20	8.03	32.59	20	25.40	258.8	0.52	0.05	1480.
30	8.03	32.59	30	25.40	259.0	0.78	0.12	1480.
50	6.04	32.67	50	25.73	227.7	1.27	0.32	1473.
75	5.19	32.74	75	25.89	212.9	1.82	0.67	1470.
100	4.65	33.04	99	26.19	184.8	2.33	1.12	1469.
125	4.29	33.52	124	26.60	145.7	2.73	1.58	1468.
150	4.23	33.66	149	26.72	134.4	3.08	2.07	1468.
175	4.15	33.71	174	26.77	130.5	3.41	2.61	1469.
200	3.96	33.74	199	26.81	126.2	3.73	3.23	1468.
225	3.86	33.79	223	26.86	121.7	4.04	3.90	1468.
250	3.83	33.83	248	26.90	118.3	4.34	4.62	1469.
300	3.71	33.92	298	26.98	111.0	4.91	6.23	1469.
400	3.60	34.03	397	27.08	102.4	5.98	10.01	1470.
500	3.49	34.14	496	27.17	94.1	6.96	14.49	1472.
600	3.36	34.19	595	27.23	89.3	7.88	19.62	1473.
800	3.06	34.30	793	27.35	79.4	9.56	31.60	1475.
1000	2.80	34.39	990	27.44	71.5	11.07	45.36	1477.
1200	2.56	34.45	1188	27.51	65.1	12.44	60.61	1480.
1500	2.27	34.52	1483	27.59	58.4	14.29	85.93	1483.



PACIFIC OCEANOGRAPHIC GROUP

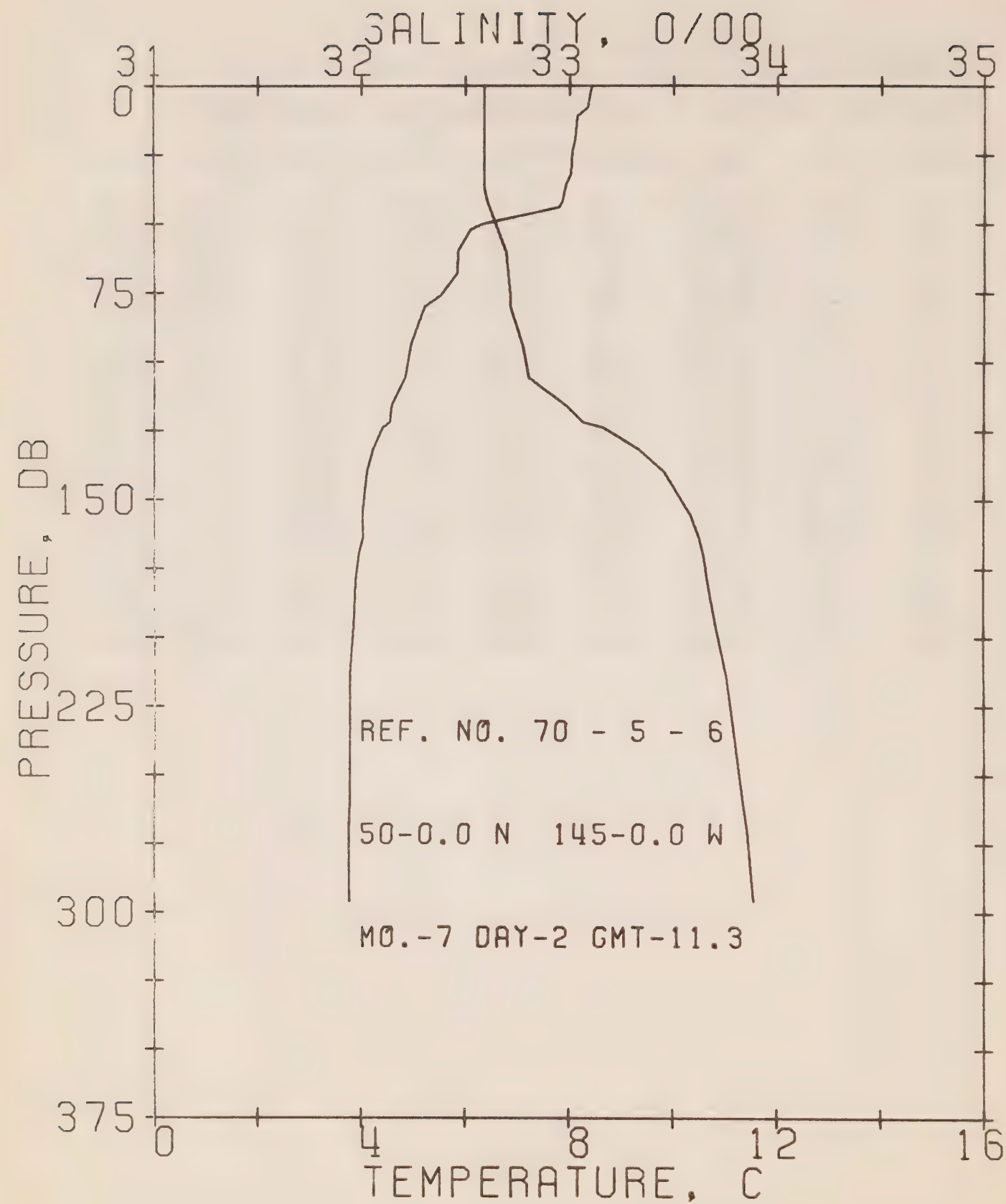
REFERENCE NO. 70- 5- 5

DATE 2/ 7/70

POSITION 50- 0.0N, 145- 0.0W GMT 2.0

RESULTS OF STP CAST 46 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.60	32.59	0	25.32	266.4	0.0	0.0	1482.
10	8.20	32.59	10	25.38	261.1	0.26	0.01	1481.
20	8.17	32.59	20	25.38	260.8	0.53	0.05	1481.
30	8.10	32.59	30	25.39	259.9	0.79	0.12	1481.
50	8.02	32.59	50	25.40	259.2	1.30	0.33	1481.
75	5.82	32.65	75	25.75	226.5	1.91	0.72	1472.
100	5.07	32.76	99	25.92	210.8	2.46	1.20	1470.
125	4.53	33.22	124	26.34	170.4	2.95	1.76	1469.
150	4.23	33.61	149	26.68	138.3	3.33	2.29	1468.
175	4.15	33.70	174	26.76	130.9	3.66	2.84	1469.
200	3.99	33.75	199	26.82	126.0	3.98	3.45	1468.
225	3.91	33.80	223	26.86	121.7	4.29	4.12	1469.
250	3.84	33.83	248	26.90	118.9	4.59	4.85	1469.
300	3.76	33.90	298	26.96	113.0	5.17	6.47	1469.
400	3.62	34.02	397	27.07	103.4	6.25	10.29	1470.
500	3.50	34.10	496	27.15	96.8	7.24	14.87	1472.
600	3.37	34.17	595	27.22	90.8	8.18	20.11	1473.
800	3.08	34.28	793	27.33	80.8	9.89	32.24	1475.
1000	2.81	34.37	990	27.42	72.9	11.42	46.28	1477.
1200	2.57	34.44	1188	27.50	66.2	12.81	61.81	1480.



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 5- 6

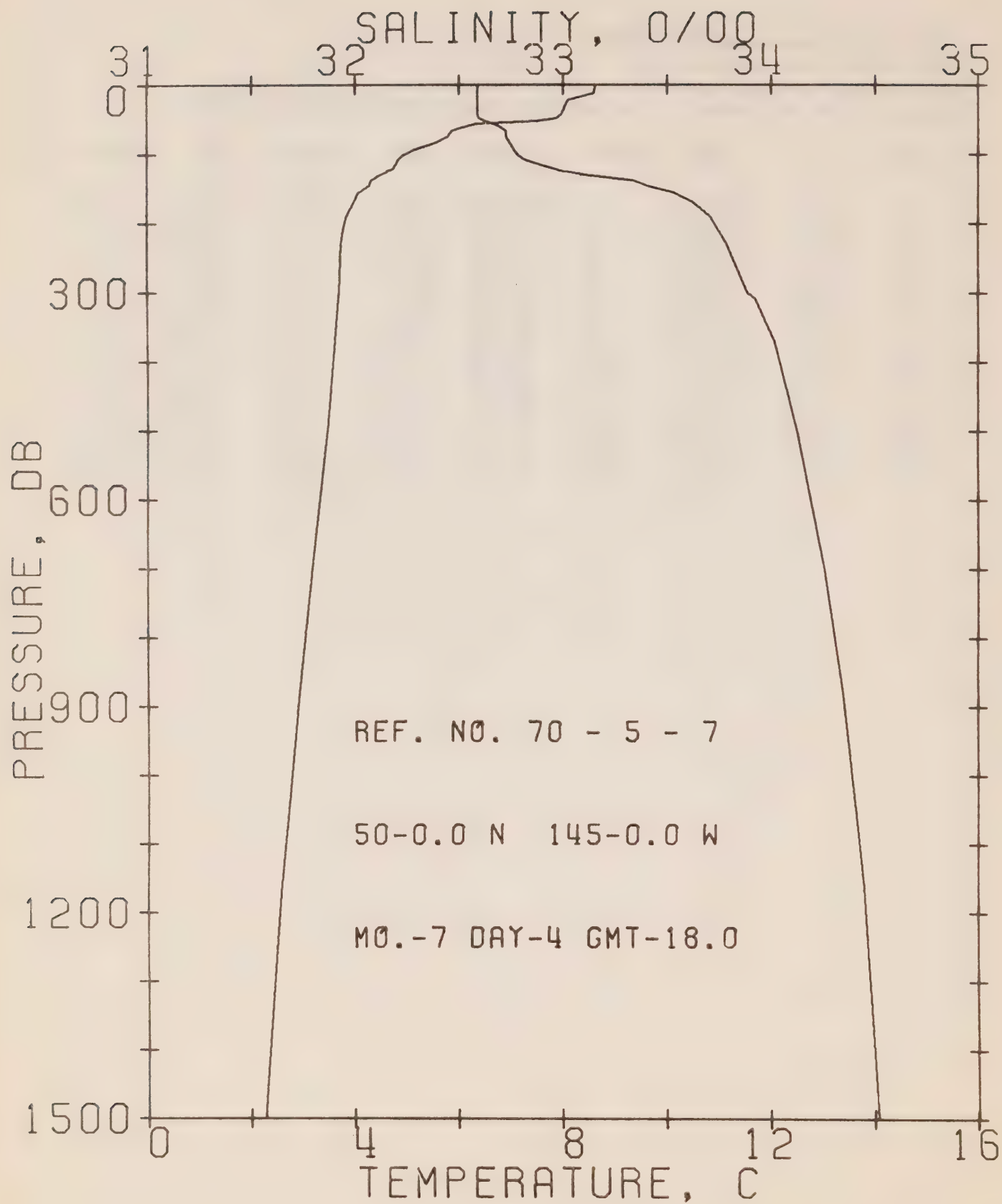
DATE 2/ 7/70

POSITION 50- 0.0N. 145- 0.0W GMT 11.3

RESULTS OF STD CAST 31 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.45	32.59	0	25.34	264.2	0.0	0.0	1432.
10	8.24	32.59	10	25.37	261.6	0.26	0.01	1481.
20	8.14	32.59	20	25.39	260.4	0.52	0.05	1481.
30	8.06	32.59	30	25.40	259.4	0.78	0.12	1480.
50	6.37	32.65	50	25.68	233.2	1.29	0.33	1474.
75	5.59	32.72	75	25.83	219.1	1.85	0.68	1472.
100	4.92	32.79	99	25.96	206.3	2.38	1.15	1469.
125	4.41	33.19	124	26.33	171.3	2.86	1.71	1468.
150	4.06	33.54	149	26.65	141.8	3.25	2.24	1468.
175	3.93	33.66	174	26.75	131.7	3.59	2.80	1468.
200	3.84	33.72	199	26.81	126.5	3.91	3.42	1468.
225	3.78	33.78	223	26.86	121.7	4.22	4.09	1468.
250	3.77	33.82	248	26.90	118.6	4.52	4.82	1468.





PACIFIC OCEANOGRAPHIC GROUP

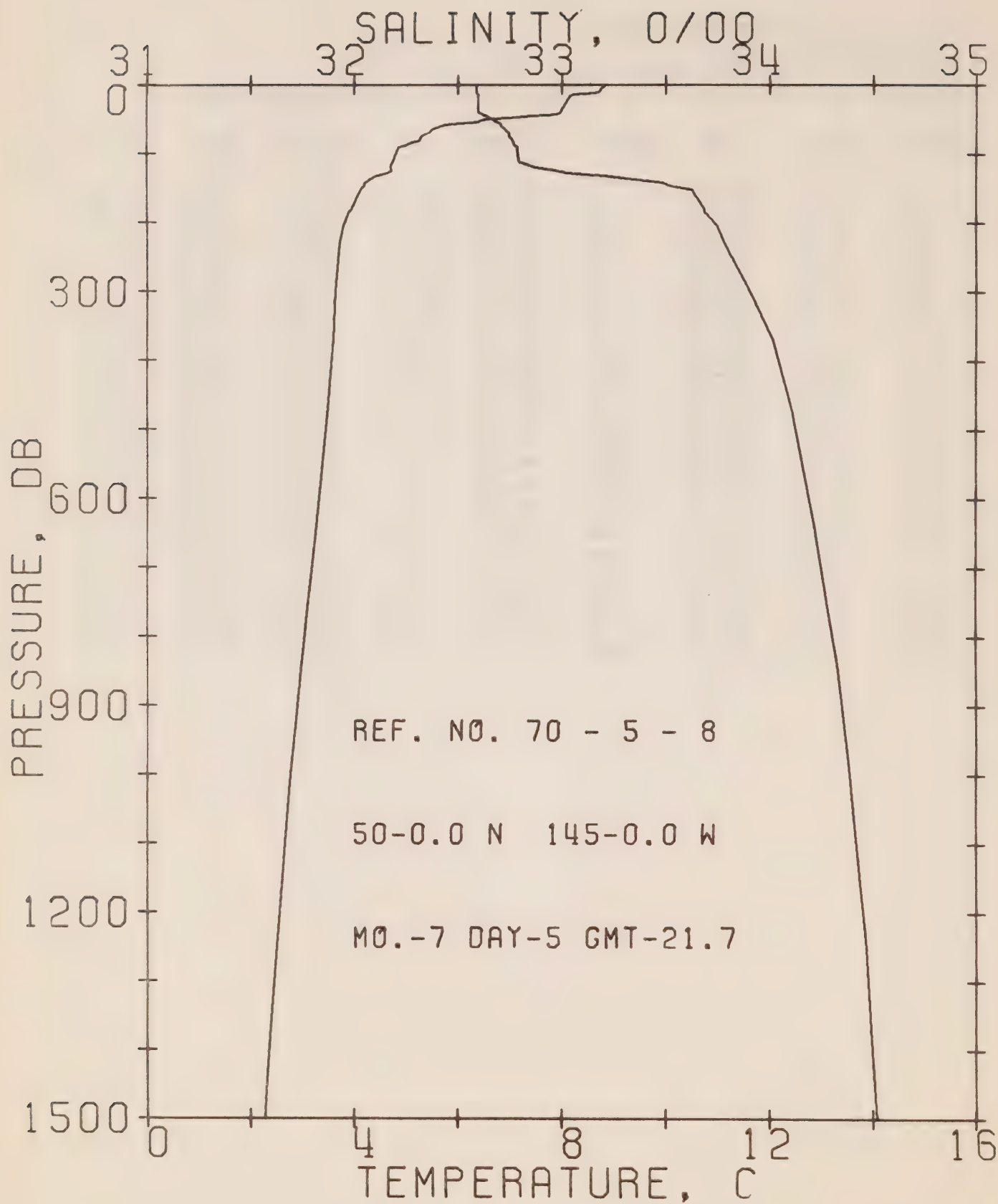
REFERENCE NO. 70- 5- 7

DATE 4/ 7/70

POSITION 50- 0.0N, 145- 0.0W GMT 18.0

RESULTS OF STP CAST 34 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.65	32.59	0	25.31	267.1	0.0	0.0	1482.
10	8.62	32.59	10	25.32	267.0	0.27	0.01	1482.
20	8.22	32.59	20	25.38	261.5	0.53	0.05	1481.
30	8.07	32.59	30	25.40	259.6	0.79	0.12	1481.
50	7.70	32.61	50	25.47	252.9	1.31	0.33	1479.
75	5.79	32.73	75	25.81	220.5	1.88	0.69	1472.
100	5.00	32.78	99	25.95	207.9	2.42	1.17	1470.
125	4.64	33.01	124	26.17	187.0	2.91	1.74	1469.
150	4.21	33.46	149	26.57	149.2	3.33	2.32	1468.
175	3.96	33.65	174	26.74	132.8	3.68	2.89	1468.
200	3.82	33.73	199	26.82	125.6	4.00	3.51	1468.
225	3.76	33.78	223	26.87	121.4	4.31	4.17	1468.
250	3.74	33.82	248	26.90	118.5	4.61	4.90	1468.
300	3.71	33.89	298	26.96	113.2	5.18	6.52	1469.
400	3.60	34.05	397	27.09	101.2	6.24	10.28	1470.
500	3.48	34.13	496	27.17	94.5	7.22	14.75	1472.
600	3.33	34.19	595	27.24	88.8	8.14	19.88	1473.
800	3.05	34.31	793	27.35	78.6	9.81	31.73	1475.
1000	2.79	34.39	990	27.44	70.9	11.30	45.36	1477.
1200	2.54	34.46	1188	27.52	64.5	12.65	60.44	1480.
1500	2.25	34.52	1484	27.59	58.2	14.49	85.61	1483.



PACIFIC OCEANOGRAPHIC GROUP

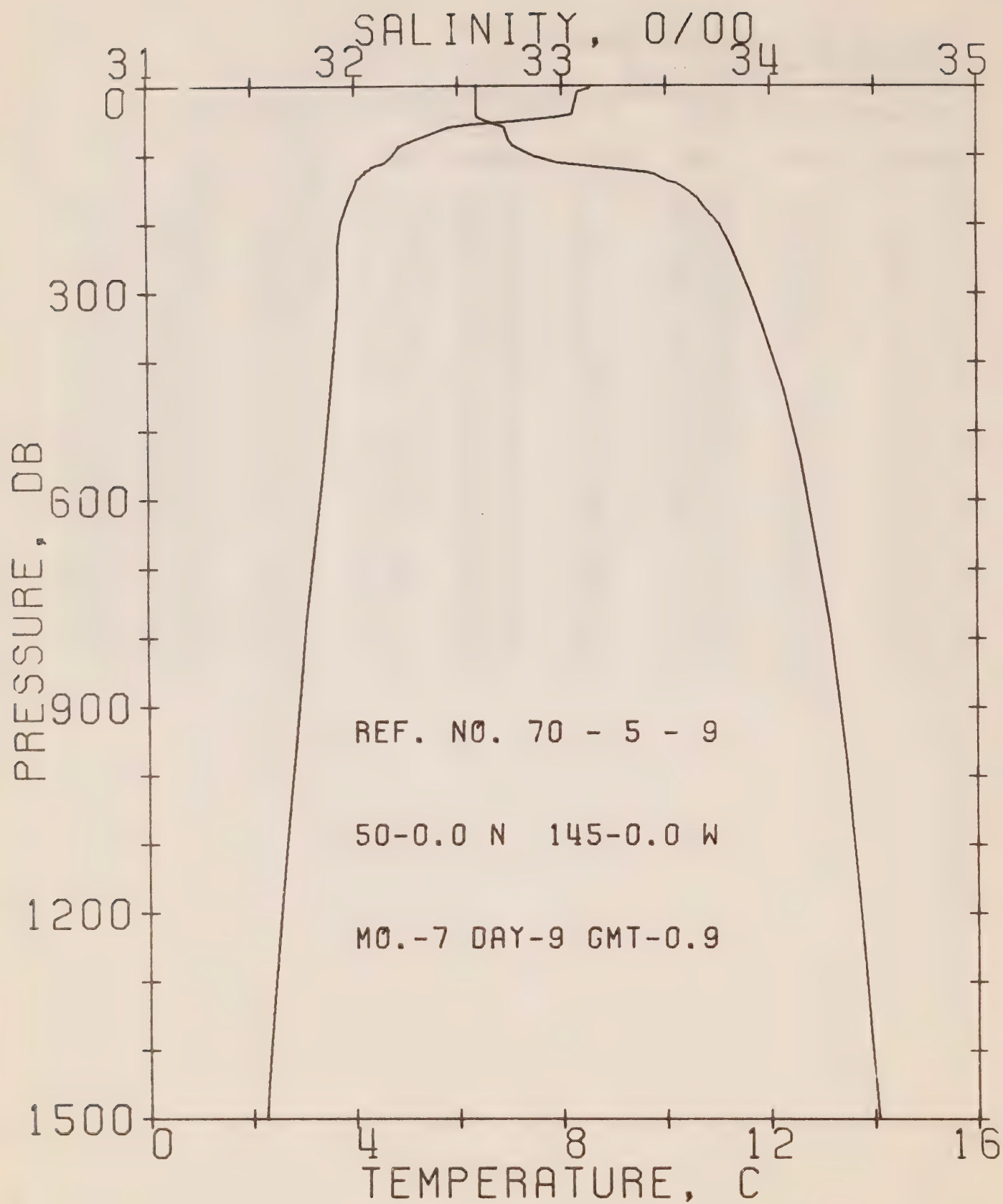
REFERENCE NO. 70- 5- 8

DATE 5/ 7/70

POSITION 50- 0.0N, 145- 0.0W GMT 21.7

RESULTS OF STP CAST 43 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.85	32.59	0	25.28	270.0	0.0	0.0	1483.
10	8.75	32.59	10	25.30	269.0	0.27	0.01	1483.
20	8.16	32.60	20	25.39	259.9	0.53	0.05	1481.
30	8.08	32.60	30	25.40	258.9	0.79	0.12	1481.
50	6.55	32.67	50	25.67	233.9	1.30	0.33	1475.
75	5.33	32.75	75	25.88	213.7	1.85	0.68	1471.
100	4.93	32.79	99	25.97	205.5	2.37	1.14	1469.
125	4.72	32.98	124	26.14	190.0	2.88	1.72	1469.
150	4.16	33.59	149	26.67	139.1	3.28	2.28	1468.
175	4.01	33.68	174	26.76	131.1	3.61	2.83	1468.
200	3.83	33.74	199	26.82	125.1	3.93	3.44	1468.
225	3.75	33.78	223	26.87	121.3	4.24	4.11	1468.
250	3.71	33.82	248	26.90	118.0	4.54	4.83	1468.
300	3.66	33.91	298	26.98	111.2	5.11	6.43	1469.
400	3.58	34.05	397	27.10	100.9	6.17	10.19	1470.
500	3.47	34.13	496	27.17	94.4	7.14	14.65	1472.
600	3.33	34.19	595	27.24	88.8	8.06	19.77	1473.
800	3.05	34.31	793	27.35	78.7	9.73	31.64	1475.
1000	2.77	34.39	990	27.44	70.9	11.22	45.27	1477.
1200	2.55	34.45	1188	27.51	64.9	12.58	60.44	1480.
1500	2.25	34.52	1484	27.59	58.2	14.42	85.67	1483.





PACIFIC OCEANOGRAPHIC GROUP

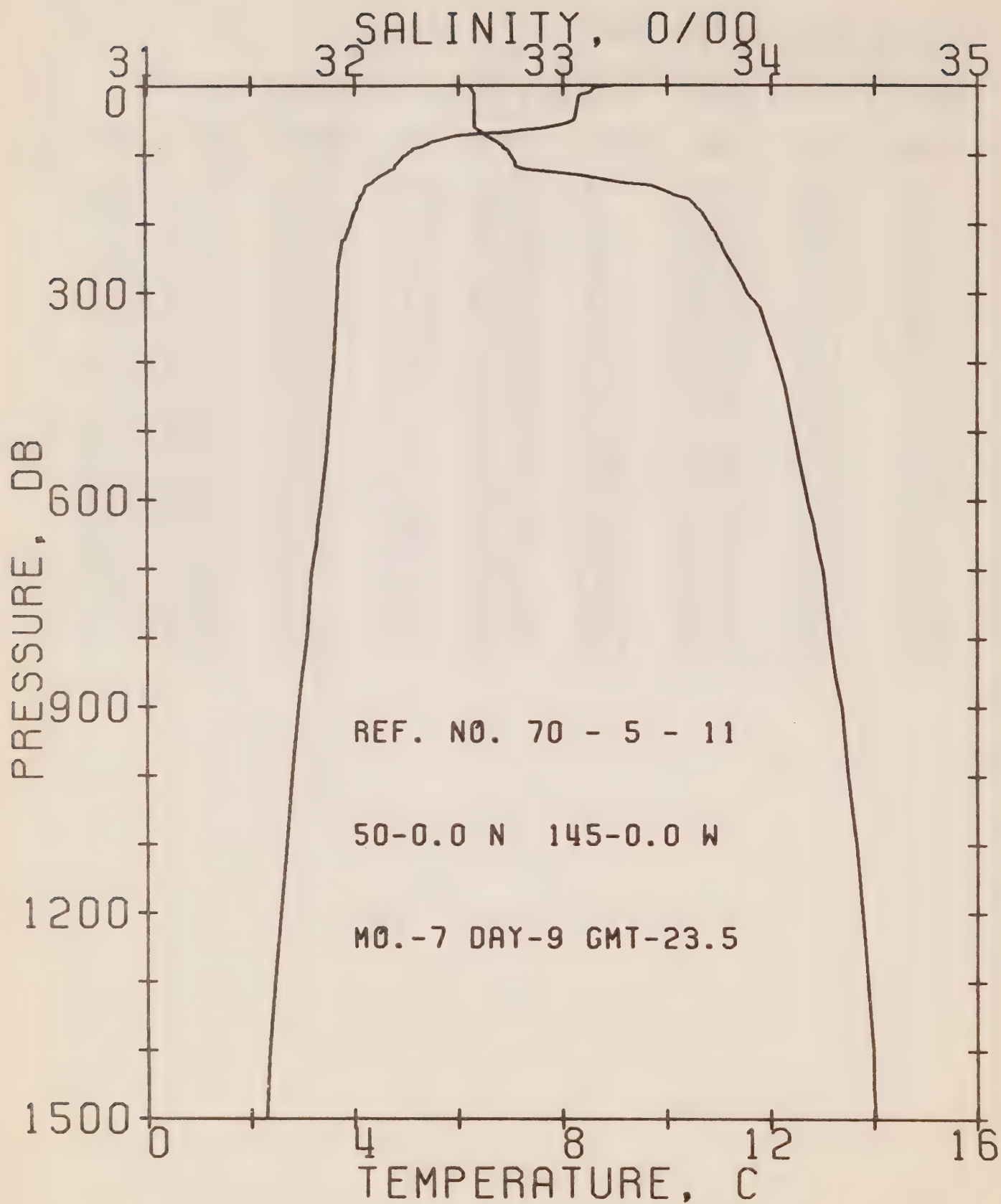
REFERENCE NO. 70- 5- 9

DATE 9/ 7/70

POSITION 50- 0.0N, 145- 0.0W GMT 0.9

RESULTS OF STD CAST 33 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.56	32.59	0	25.32	265.8	0.0	0.0	1482.
10	8.34	32.59	10	25.36	263.0	0.26	0.01	1481.
20	8.30	32.59	20	25.36	262.7	0.53	0.05	1481.
30	8.27	32.59	30	25.37	262.4	0.79	0.12	1481.
50	7.32	32.63	50	25.54	246.4	1.31	0.33	1478.
75	5.34	32.75	75	25.88	214.2	1.87	0.69	1471.
100	4.79	32.86	99	26.03	200.2	2.39	1.15	1469.
125	4.24	33.39	124	26.51	154.7	2.84	1.67	1468.
150	4.03	33.60	149	26.70	137.0	3.20	2.17	1468.
175	3.88	33.69	174	26.78	129.1	3.54	2.72	1467.
200	3.76	33.76	199	26.85	122.8	3.85	3.32	1467.
225	3.72	33.80	223	26.89	119.1	4.15	3.98	1468.
250	3.70	33.84	248	26.92	116.3	4.45	4.69	1468.
300	3.69	33.91	298	26.98	111.5	5.02	6.28	1469.
400	3.60	34.03	397	27.08	102.7	6.09	10.09	1470.
500	3.47	34.12	496	27.16	95.3	7.08	14.61	1472.
600	3.33	34.18	595	27.23	89.4	8.00	19.77	1473.
800	3.03	34.30	793	27.35	79.3	9.68	31.70	1475.
1000	2.79	34.38	990	27.43	72.1	11.19	45.52	1477.
1200	2.55	34.44	1188	27.50	66.2	12.58	60.98	1480.
1500	2.23	34.52	1484	27.59	58.0	14.44	86.43	1483.



PACIFIC OCEANOGRAPHIC GROUP

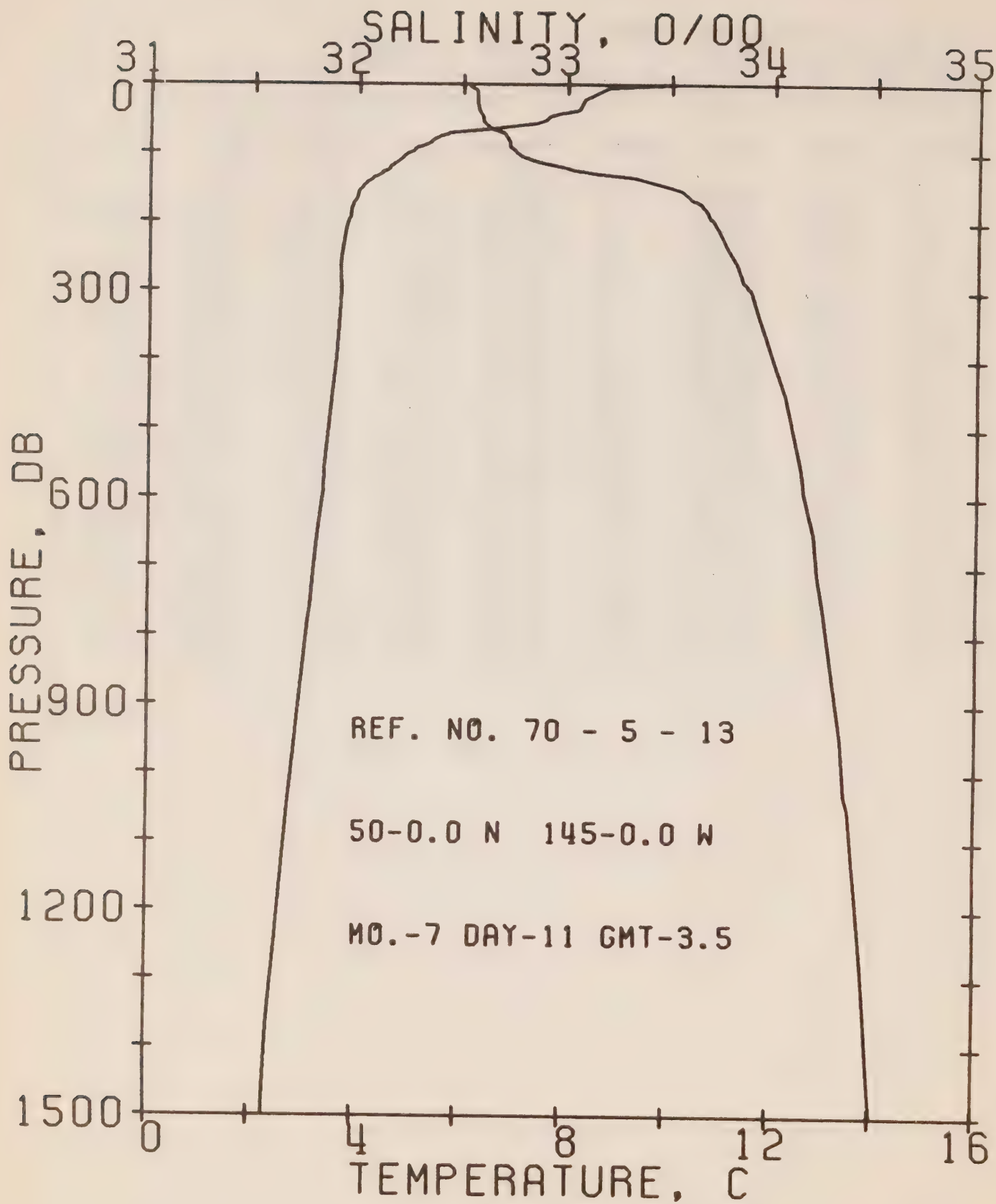
REFERENCE NO. 70- 5- 11

DATE 9/ 7/70

POSITION 50- 0.0N. 145- 0.0W GMT 23.5

RESULTS OF STD CAST 72 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	9.05	32.55	0	25.22	275.9	0.0	0.0	1484.
10	8.56	32.58	10	25.32	267.0	0.27	0.01	1482.
20	8.32	32.58	20	25.35	263.7	0.53	0.05	1481.
30	8.30	32.58	30	25.36	263.4	0.80	0.12	1481.
50	8.25	32.58	50	25.36	263.1	1.32	0.34	1482.
75	5.84	32.66	75	25.75	226.5	1.95	0.73	1473.
100	5.04	32.76	99	25.92	210.1	2.49	1.21	1470.
125	4.67	32.97	124	26.13	190.7	3.00	1.80	1469.
150	4.21	33.48	149	26.58	147.9	3.42	2.38	1468.
175	4.07	33.64	174	26.73	134.3	3.77	2.96	1468.
200	3.94	33.71	199	26.79	128.5	4.09	3.58	1468.
225	3.78	33.75	223	26.84	123.5	4.41	4.27	1468.
250	3.72	33.80	248	26.88	119.8	4.71	5.00	1468.
300	3.68	33.89	298	26.96	112.9	5.29	6.63	1469.
400	3.61	34.04	397	27.09	101.8	6.36	10.40	1470.
500	3.49	34.11	496	27.16	95.8	7.34	14.91	1472.
600	3.36	34.18	595	27.22	90.0	8.27	20.12	1473.
800	3.08	34.29	793	27.34	80.4	9.96	32.10	1475.
1000	2.80	34.38	990	27.43	72.0	11.47	45.94	1477.
1200	2.58	34.45	1188	27.51	65.6	12.84	61.29	1480.
1500	2.27	34.51	1484	27.58	59.2	14.70	86.78	1483.



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 5- 13

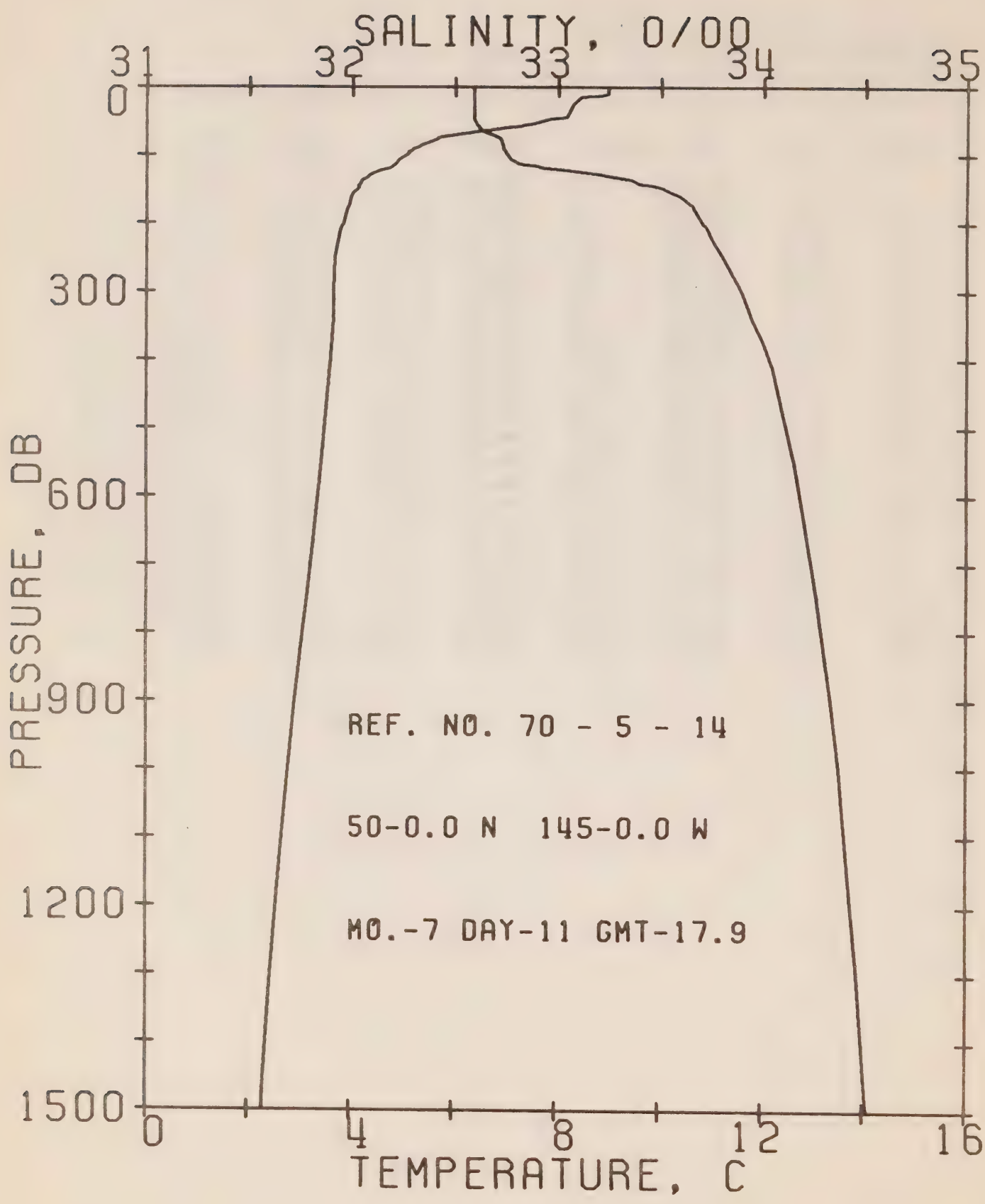
DATE 11/ 7/70

POSITION 50- 0.0N, 145- 0.0W GMT 3.5

RESULTS OF STD CAST 63 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	10.00	32.53	0	25.05	292.0	0.0	0.0	1487.
10	8.67	32.57	10	25.29	269.2	0.28	0.01	1482.
20	8.41	32.57	20	25.33	265.8	0.54	0.05	1482.
30	8.31	32.58	30	25.35	264.0	0.81	0.12	1481.
50	7.64	32.60	50	25.47	253.2	1.33	0.33	1479.
75	5.61	32.71	75	25.82	219.7	1.92	0.71	1472.
100	4.98	32.77	99	25.94	208.8	2.46	1.19	1470.
125	4.60	33.05	124	26.20	183.9	2.95	1.75	1469.
150	4.10	33.52	149	26.62	144.1	3.35	2.31	1468.
175	3.94	33.66	174	26.75	131.9	3.70	2.88	1468.
200	3.84	33.72	199	26.81	126.7	4.02	3.50	1468.
225	3.76	33.76	223	26.85	122.6	4.33	4.17	1468.
250	3.71	33.81	248	26.89	118.9	4.63	4.90	1468.
300	3.71	33.90	298	26.97	112.5	5.21	6.53	1469.
400	3.62	34.01	397	27.06	104.1	6.30	10.38	1470.
500	3.50	34.11	496	27.15	96.4	7.29	14.95	1472.
600	3.38	34.17	595	27.21	91.3	8.23	20.19	1473.
800	3.09	34.28	793	27.33	81.4	9.95	32.42	1475.
1000	2.81	34.36	990	27.42	73.3	11.49	46.50	1477.
1200	2.58	34.43	1188	27.50	66.6	12.88	62.09	1480.
1500	2.27	34.51	1484	27.58	59.2	14.76	87.90	1483.





PACIFIC OCEANOGRAPHIC GROUP

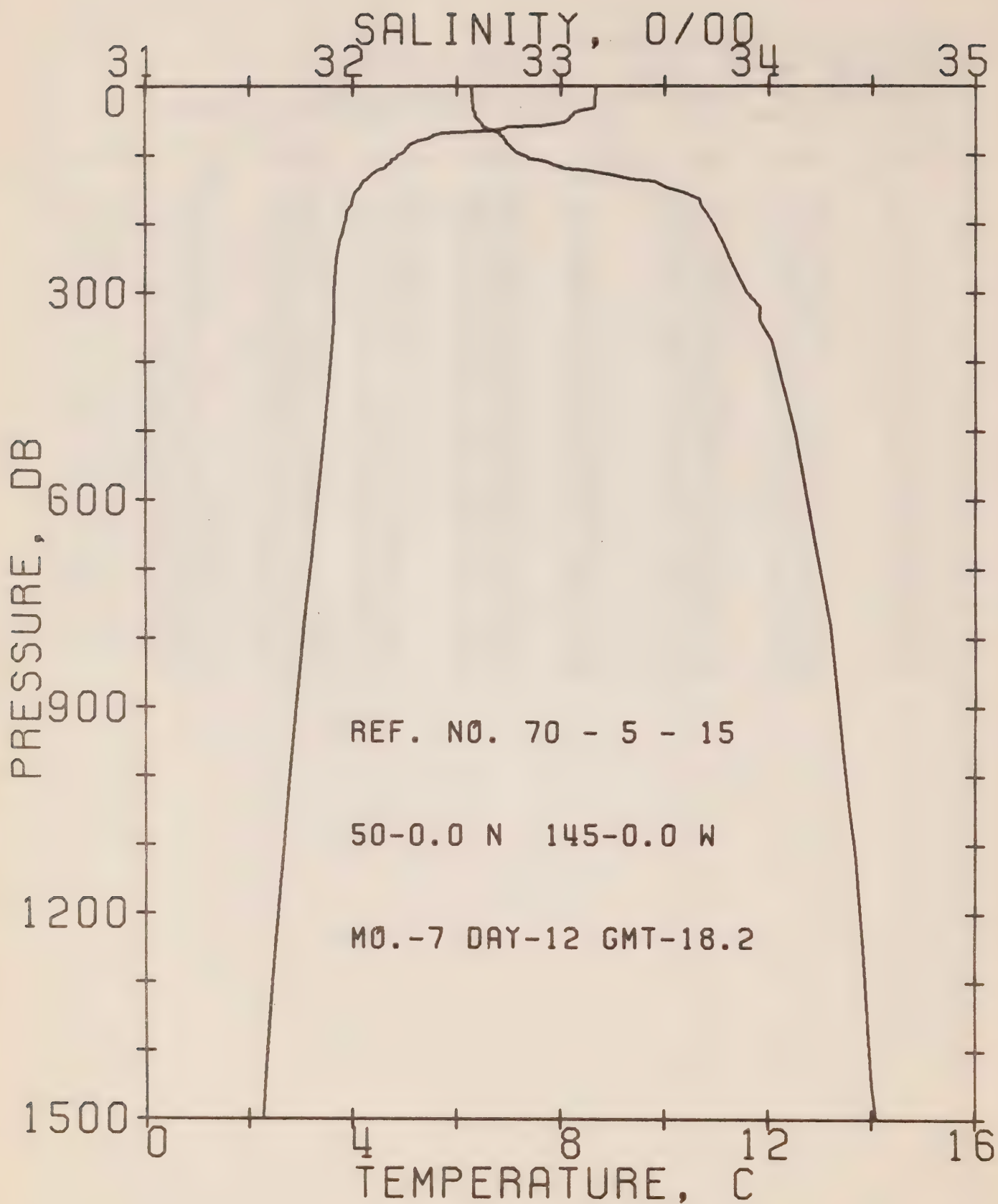
REFERENCE NO. 70- 5- 14

DATE 11/ 7/70

POSITION 50- 0.0N. 145- 0.0W GMT 17.9

RESULTS OF STD CAST 56 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	9.00	32.59	0	25.26	272.2	0.0	0.0	1484.
10	9.00	32.59	10	25.26	272.6	0.27	0.01	1484.
20	8.39	32.59	20	25.35	263.9	0.54	0.05	1482.
30	8.29	32.59	30	25.37	262.6	0.80	0.12	1481.
50	7.70	32.60	50	25.46	254.0	1.32	0.33	1479.
75	5.69	32.72	75	25.82	219.9	1.92	0.71	1472.
100	5.08	32.76	99	25.92	210.2	2.45	1.19	1470.
125	4.48	33.13	124	26.28	176.8	2.95	1.76	1468.
150	4.13	33.52	149	26.63	143.7	3.35	2.31	1468.
175	3.97	33.66	174	26.75	132.0	3.69	2.87	1468.
200	3.87	33.71	199	26.80	127.6	4.01	3.49	1468.
225	3.76	33.76	223	26.85	122.9	4.33	4.17	1468.
250	3.70	33.81	248	26.90	118.8	4.63	4.90	1468.
300	3.67	33.90	298	26.97	112.1	5.21	6.52	1469.
400	3.61	34.04	397	27.08	102.0	6.28	10.33	1470.
500	3.50	34.12	496	27.16	95.3	7.26	14.83	1472.
600	3.37	34.19	595	27.23	89.8	8.19	20.00	1473.
800	3.09	34.29	793	27.34	80.2	9.88	32.06	1475.
1000	2.80	34.38	990	27.43	72.0	11.40	45.95	1477.
1200	2.56	34.44	1188	27.50	66.1	12.78	61.41	1480.
1500	2.27	34.52	1484	27.59	58.4	14.65	86.94	1483.



PACIFIC OCEANOGRAPHIC GROUP

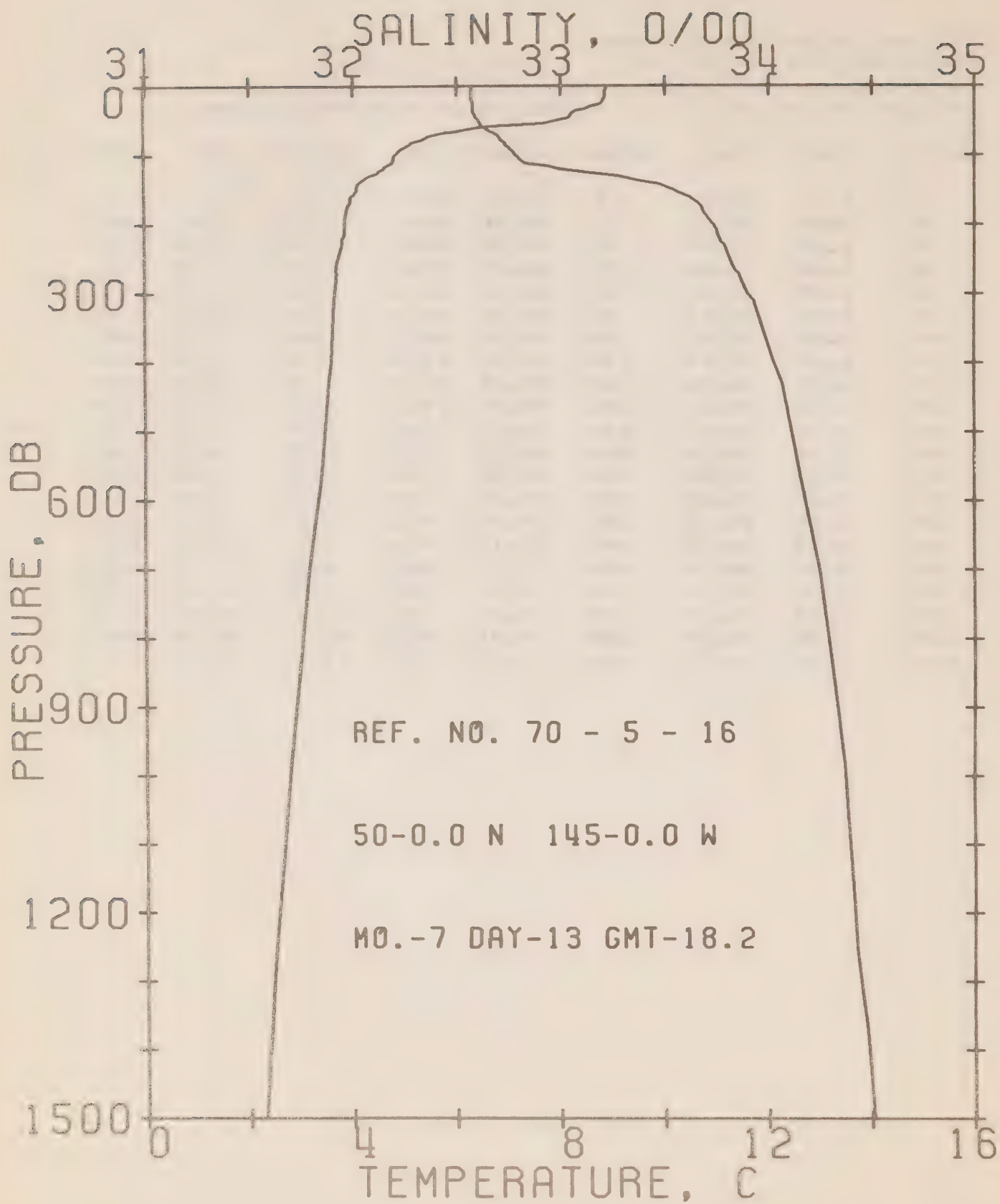
REFERENCE NO. 70- 5- 15

DATE 12/ 7/70

POSITION 50- 0.0N. 145- 0.0W GMT 18.2

RESULTS OF STD CAST 57 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.70	32.57	0	25.29	269.3	0.0	0.0	1482.
10	8.69	32.57	10	25.29	269.3	0.27	0.01	1483.
20	8.69	32.58	20	25.30	269.2	0.54	0.05	1483.
30	8.68	32.58	30	25.30	269.0	0.81	0.12	1483.
50	8.15	32.61	50	25.40	259.5	1.33	0.34	1481.
75	5.49	32.73	75	25.85	217.2	1.94	0.72	1471.
100	4.90	32.82	99	25.99	204.1	2.46	1.19	1469.
125	4.44	33.18	124	26.32	172.9	2.94	1.74	1468.
150	4.12	33.54	149	26.64	142.3	3.33	2.28	1468.
175	3.98	33.68	174	26.77	130.5	3.67	2.83	1468.
200	3.85	33.74	199	26.82	125.1	3.99	3.44	1468.
225	3.76	33.78	223	26.87	121.3	4.29	4.11	1468.
250	3.70	33.82	248	26.90	118.2	4.59	4.84	1468.
300	3.66	33.90	298	26.97	112.0	5.17	6.45	1469.
400	3.59	34.05	397	27.09	101.1	6.23	10.21	1470.
500	3.47	34.13	496	27.17	94.4	7.21	14.68	1472.
600	3.34	34.19	595	27.23	89.1	8.12	19.81	1473.
800	3.04	34.31	793	27.35	78.7	9.80	31.71	1475.
1000	2.79	34.38	990	27.43	72.1	11.31	45.48	1477.
1200	2.56	34.45	1188	27.51	65.6	12.68	60.85	1480.
1500	2.26	34.52	1484	27.59	58.3	14.54	86.38	1493.





PACIFIC OCEANOGRAPHIC GROUP

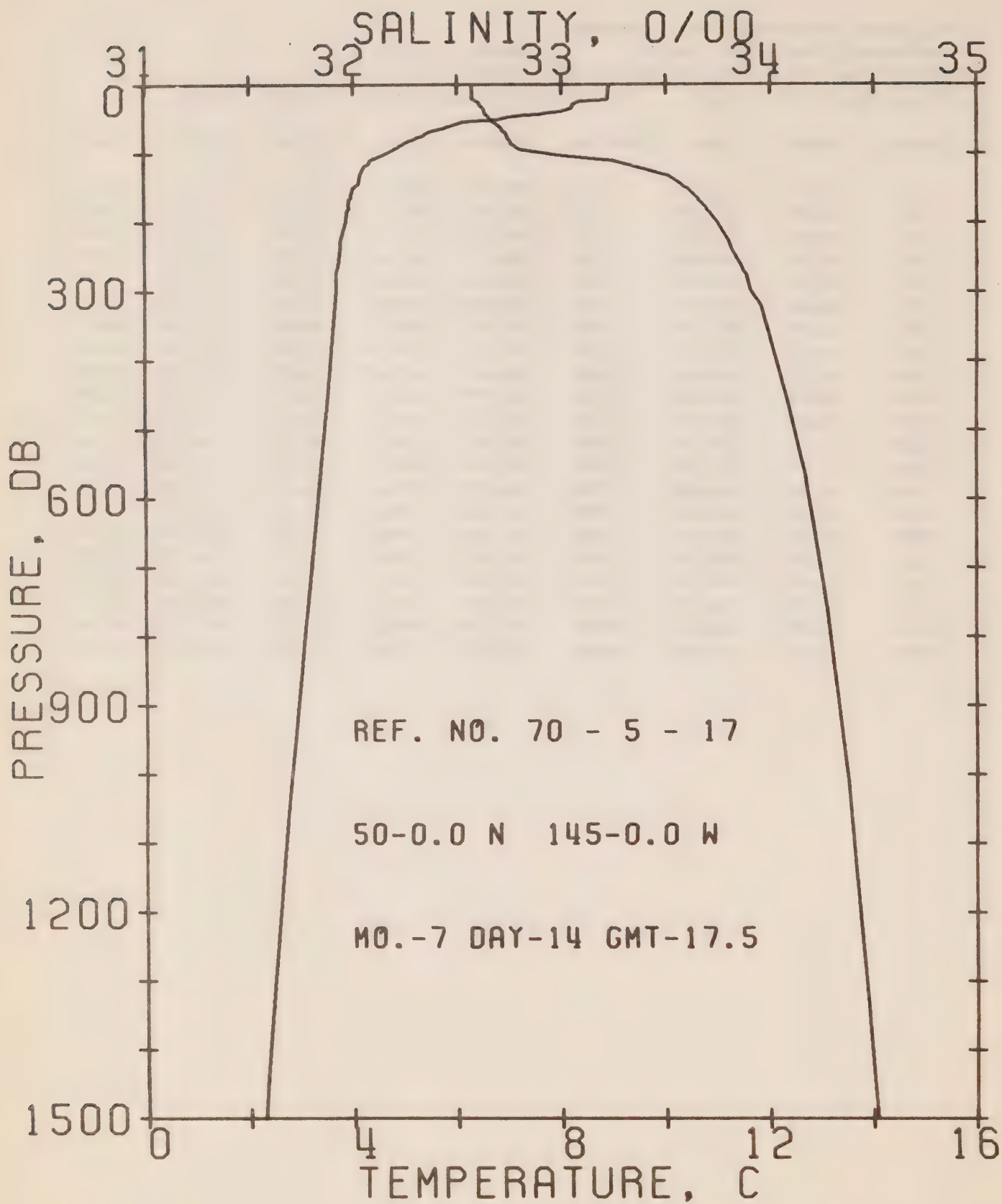
REFERENCE NO. 70- 5- 16

DATE 13/ 7/70

POSITION 50- 0.0N, 145- 0.0W GMT 18.2

RESULTS OF STD CAST 71 POINTS TAKEN FROM ANALOG TRACE

PFESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.89	32.57	0	25.26	272.1	0.0	0.0	1483.
10	8.87	32.57	10	25.26	272.1	0.27	0.01	1483.
20	8.84	32.57	20	25.27	271.7	0.54	0.06	1483.
30	8.58	32.58	30	25.31	267.5	0.81	0.12	1482.
50	7.93	32.61	50	25.43	256.4	1.34	0.34	1480.
75	5.44	32.71	75	25.84	217.8	1.92	0.71	1471.
100	4.85	32.79	99	25.97	205.6	2.45	1.18	1469.
125	4.51	33.13	124	26.27	176.9	2.94	1.74	1469.
150	4.10	33.54	149	26.64	142.0	3.33	2.28	1468.
175	3.92	33.68	174	26.77	130.0	3.67	2.84	1468.
200	3.86	33.74	199	26.82	125.5	3.99	3.45	1468.
225	3.92	33.77	223	26.85	122.5	4.30	4.12	1468.
250	3.74	33.82	248	26.90	118.6	4.60	4.85	1468.
300	3.67	33.90	298	26.97	112.1	5.17	6.46	1469.
400	3.60	34.03	397	27.08	102.4	6.24	10.25	1470.
500	3.47	34.11	496	27.16	95.6	7.22	14.75	1472.
600	3.35	34.18	595	27.22	90.0	8.15	19.95	1473.
800	3.04	34.29	793	27.34	79.8	9.84	31.94	1475.
1000	2.78	34.37	990	27.43	72.1	11.36	45.78	1477.
1200	2.56	34.42	1188	27.48	67.7	12.75	61.41	1480.
1500	2.27	34.51	1484	27.58	59.2	14.65	87.43	1483.



PACIFIC OCEANOGRAPHIC GROUP

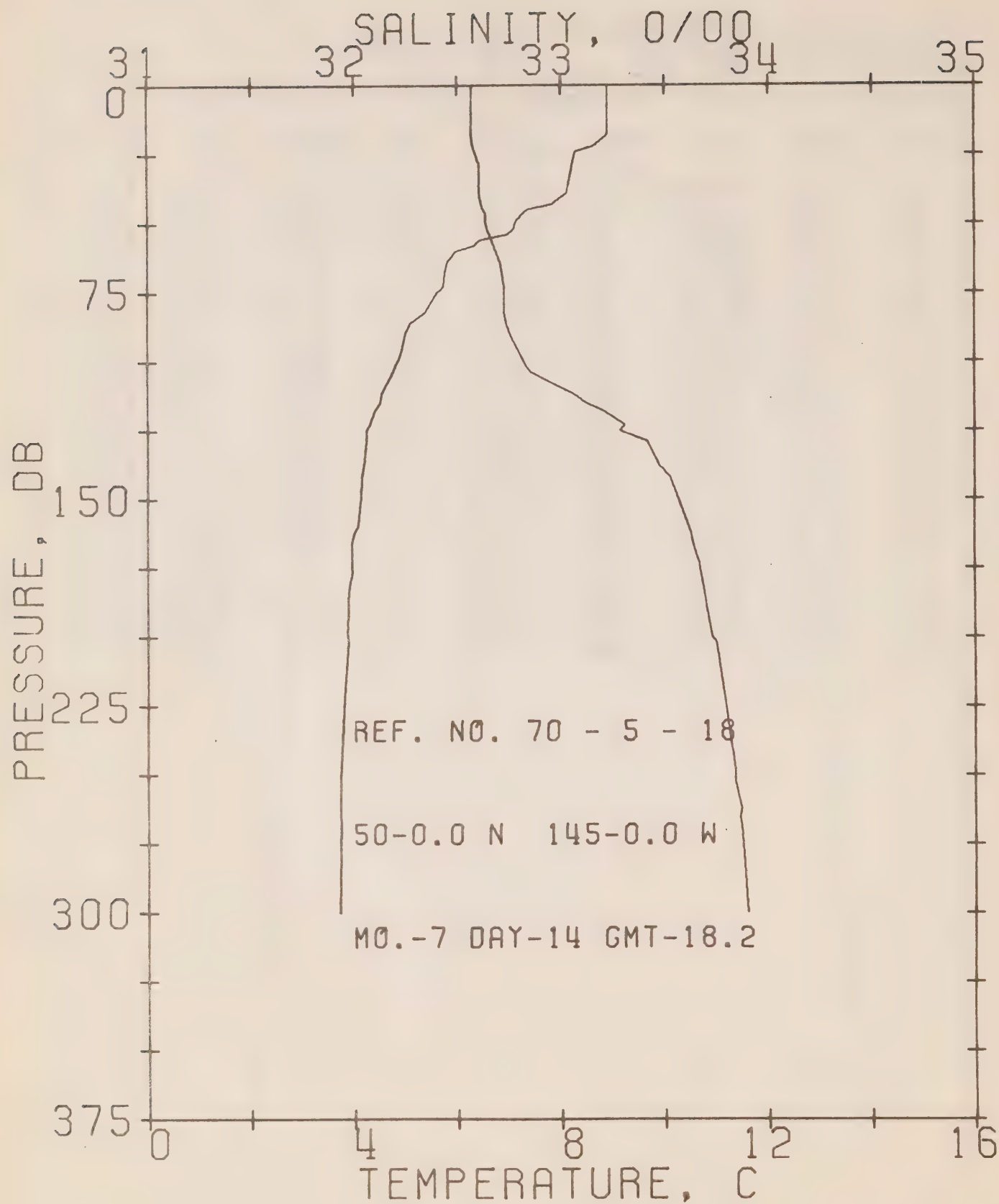
REFERENCE NO. 70- 5- 17

DATE 14/ 7/70

POSITION 50- 0.0N, 145- 0.0W GMT 17.5

RESULTS OF STP CAST 59 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.95	32.57	0	25.25	273.0	0.0	0.0	1483.
10	8.92	32.57	10	25.25	272.9	0.27	0.01	1483.
20	8.90	32.57	20	25.26	272.8	0.55	0.06	1484.
30	8.24	32.61	30	25.39	260.1	0.81	0.12	1481.
50	6.86	32.67	50	25.63	238.0	1.31	0.33	1476.
75	5.38	32.75	75	25.88	214.4	1.87	0.68	1471.
100	4.65	32.94	99	26.11	192.1	2.39	1.14	1468.
125	4.20	33.43	124	26.55	150.9	2.80	1.62	1468.
150	4.03	33.61	149	26.70	136.3	3.16	2.11	1468.
175	3.93	33.69	174	26.78	129.5	3.49	2.66	1468.
200	3.88	33.75	199	26.83	124.4	3.81	3.27	1468.
225	3.79	33.80	223	26.88	119.9	4.11	3.93	1468.
250	3.76	33.84	248	26.92	116.8	4.41	4.65	1468.
300	3.69	33.91	298	26.98	111.2	4.98	6.24	1469.
400	3.58	34.03	397	27.08	101.9	6.04	10.00	1470.
500	3.47	34.12	496	27.17	94.9	7.02	14.50	1472.
600	3.34	34.19	595	27.23	89.1	7.94	19.64	1473.
800	3.08	34.30	793	27.34	79.9	9.62	31.61	1475.
1000	2.81	34.38	990	27.43	72.4	11.15	45.50	1477.
1200	2.59	34.44	1188	27.50	66.7	12.54	61.04	1480.
1500	2.25	34.52	1484	27.59	58.2	14.41	86.67	1483.



PACIFIC OCEANOGRAPHIC GROUP

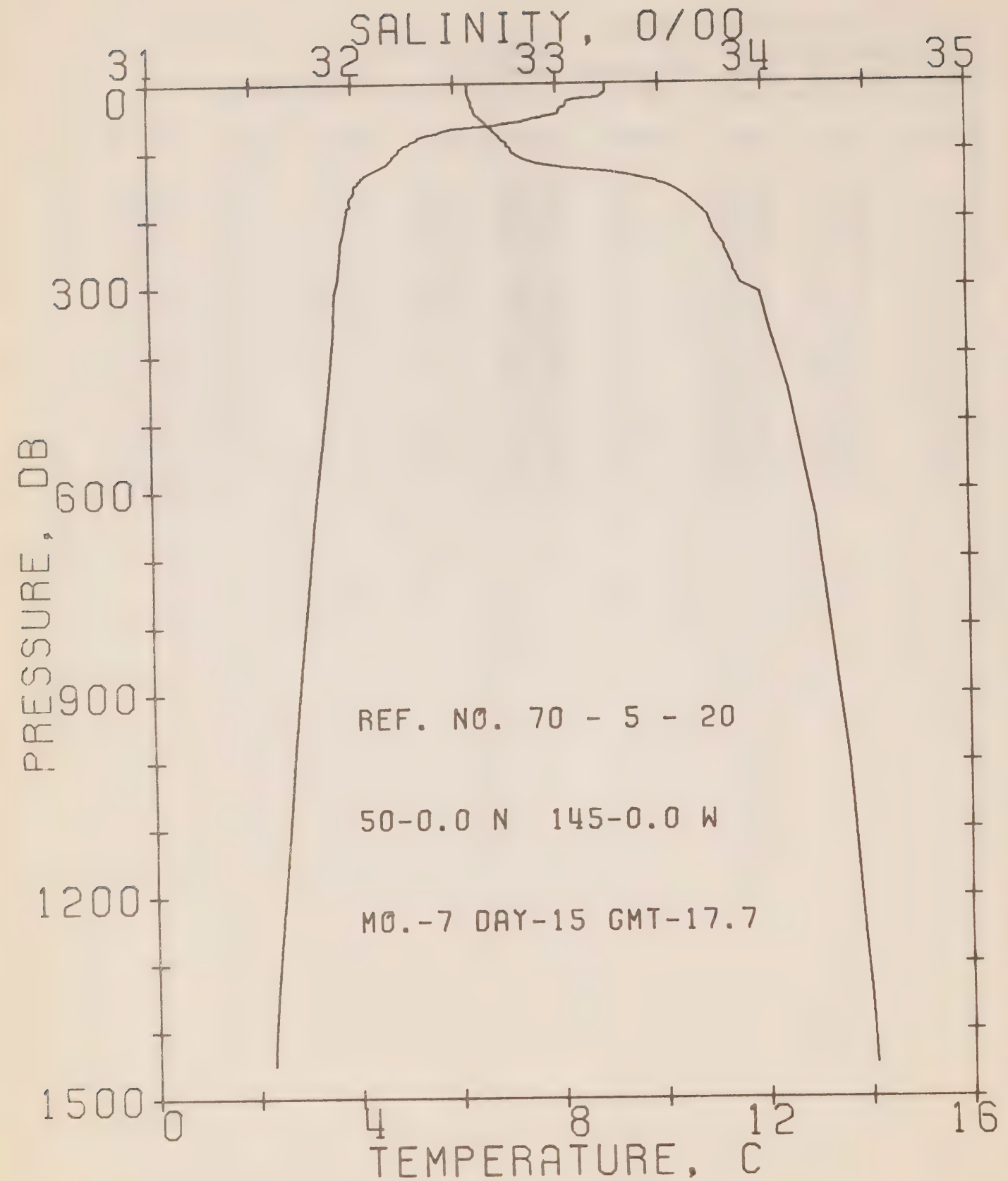
REFERENCE NO. 70- 5- 18 DATE 14/ 7/70

POSITION 50- 0.0N, 145- 0.0W GMT 18.2

RESULTS OF STP CAST 58 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.92	32.57	0	25.25	272.6	0.0	0.0	1483.
10	8.72	32.57	10	25.25	273.0	0.27	0.01	1483.
20	8.78	32.57	20	25.28	270.8	0.55	0.06	1483.
30	8.23	32.61	30	25.39	260.3	0.81	0.12	1481.
50	7.14	32.64	50	25.57	243.3	1.32	0.33	1477.
75	5.62	32.73	75	25.83	218.6	1.89	0.69	1472.
100	4.87	32.83	99	25.99	203.3	2.42	1.16	1469.
125	4.25	33.28	124	26.42	163.1	2.87	1.68	1468.
150	4.15	33.57	149	26.66	140.5	3.24	2.20	1468.
175	3.97	33.67	174	26.76	131.2	3.58	2.76	1468.
200	3.87	33.73	199	26.81	126.1	3.90	3.37	1468.
225	3.81	33.80	223	26.87	120.7	4.21	4.04	1468.
250	3.74	33.84	248	26.92	116.9	4.50	4.76	1468.
300	3.69	33.90	298	26.97	112.3	5.08	6.36	1469.





PACIFIC OCEANOGRAPHIC GROUP

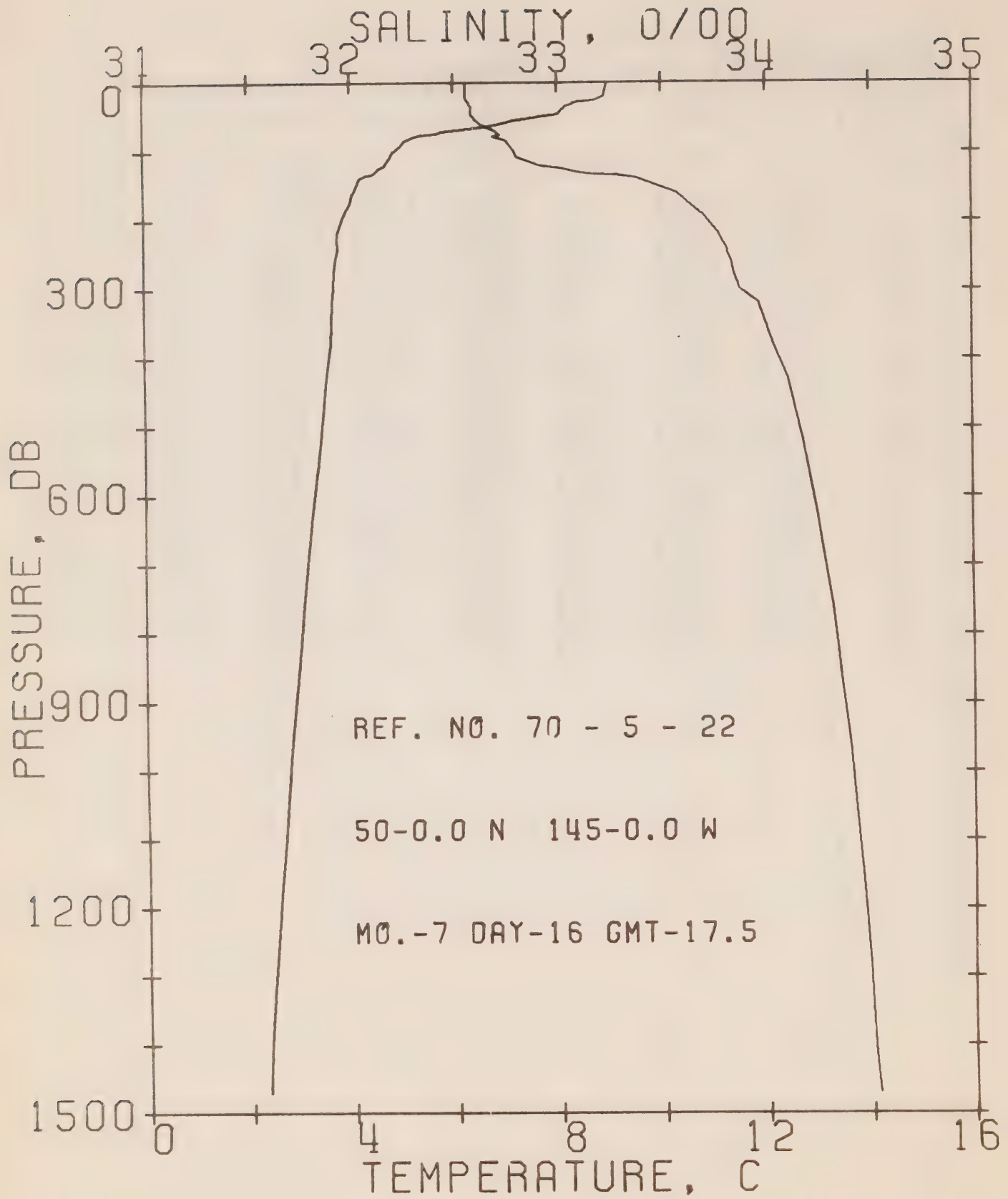
REFERENCE NO. 70- 5- 20

DATE 15/ 7/70

POSITION 50- 0.0N. 145- 0.0W GMT 17.7

RESULTS OF STD CAST 70 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.98	32.57	0	25.24	273.4	0.0	0.0	1483.
10	8.98	32.57	10	25.24	273.8	0.27	0.01	1484.
20	8.89	32.58	20	25.27	271.9	0.55	0.06	1483.
30	8.23	32.59	30	25.37	261.8	0.81	0.12	1431.
50	7.72	32.63	50	25.48	252.1	1.33	0.33	1480.
75	5.55	32.71	75	25.82	219.3	1.92	0.71	1471.
100	4.95	32.79	99	25.95	207.2	2.45	1.18	1469.
125	4.55	33.07	124	26.22	181.7	2.94	1.75	1469.
150	4.07	33.54	149	26.64	142.0	3.34	2.30	1468.
175	3.95	33.67	174	26.76	131.5	3.68	2.86	1468.
200	3.89	33.74	199	26.82	125.2	4.00	3.47	1468.
225	3.82	33.78	223	26.86	121.8	4.31	4.14	1468.
250	3.77	33.83	248	26.90	118.0	4.61	4.86	1468.
300	3.68	33.92	298	26.99	110.6	5.18	5.48	1469.
400	3.56	34.07	397	27.12	99.0	6.21	10.13	1470.
500	3.41	34.15	496	27.20	92.0	7.16	14.49	1471.
600	3.26	34.22	595	27.27	85.9	8.05	19.47	1472.
800	2.99	34.32	793	27.37	77.4	9.68	31.05	1475.
1000	2.73	34.40	990	27.46	69.5	11.15	44.45	1477.
1200	2.52	34.46	1188	27.52	64.1	12.48	59.37	1480.



PACIFIC OCEANOGRAPHIC GROUP

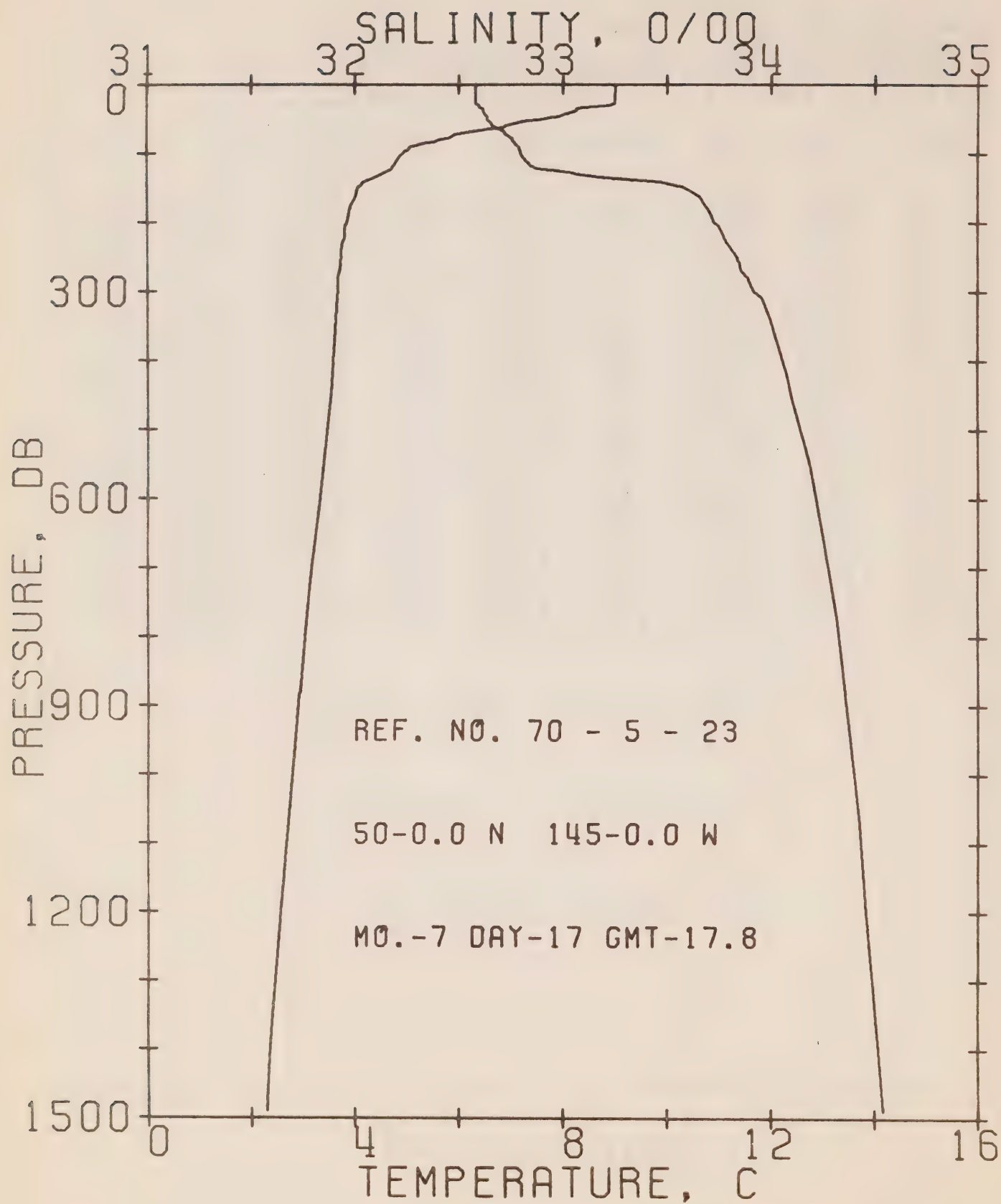
REFERENCE NO. 70- 5- 22

DATE 16/ 7/70

POSITION 50- 0.0N, 145- 0.0W GMT 17.5

RESULTS OF STP CAST 54 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.99	32.56	0	25.24	274.3	0.0	0.0	1484.
10	8.96	32.56	10	25.24	274.3	0.27	0.01	1484.
20	8.94	32.56	20	25.24	274.1	0.55	0.06	1484.
30	8.33	32.58	30	25.35	264.0	0.82	0.12	1482.
50	7.63	32.60	50	25.47	252.8	1.34	0.34	1479.
75	5.54	32.72	75	25.84	219.1	1.93	0.71	1471.
100	4.96	32.80	99	25.97	205.2	2.46	1.18	1469.
125	4.57	33.03	124	26.19	184.9	2.95	1.75	1469.
150	4.15	33.49	149	26.60	146.5	3.36	2.31	1468.
175	4.02	33.63	174	26.72	134.6	3.71	2.89	1468.
200	3.85	33.73	199	26.81	126.2	4.03	3.51	1468.
225	3.76	33.79	223	26.87	120.8	4.34	4.18	1468.
250	3.75	33.83	248	26.90	118.1	4.64	4.90	1468.
300	3.68	33.88	298	26.95	113.6	5.22	6.52	1469.
400	3.59	34.07	397	27.11	99.4	6.27	10.25	1470.
500	3.45	34.16	496	27.20	91.5	7.21	14.59	1472.
600	3.29	34.23	595	27.27	85.6	8.10	19.54	1473.
800	3.01	34.33	793	27.38	76.4	9.71	31.02	1475.
1000	2.77	34.41	990	27.46	69.4	11.17	44.35	1477.
1200	2.54	34.47	1188	27.53	63.8	12.50	59.25	1480.





PACIFIC OCEANOGRAPHIC GROUP

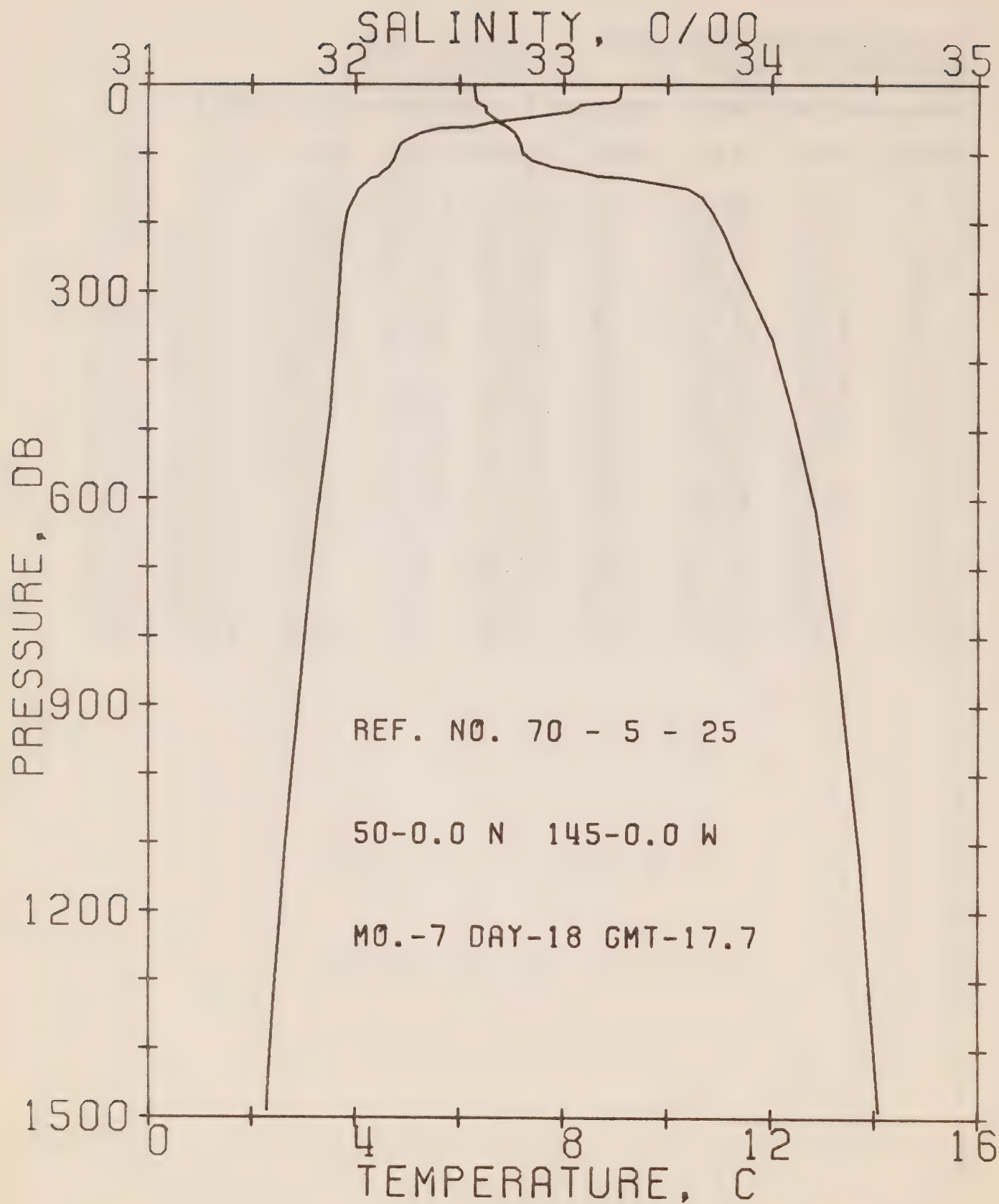
REFERENCE NO. 70- 5- 23

DATE 17/ 7/70

POSITION 50- 0.0N. 145- 0.0W GMT 17.8

RESULTS OF STP CAST 70 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA n	POT. EN	SOUND
0	9.03	32.58	0	25.24	273.4	0.0	0.0	1484.
10	9.02	32.58	10	25.25	273.7	0.27	0.01	1484.
20	9.02	32.58	20	25.25	273.8	0.55	0.06	1484.
30	8.93	32.60	30	25.28	271.2	0.82	0.13	1484.
50	7.65	32.64	50	25.50	250.4	1.34	0.34	1479.
75	5.89	32.74	75	25.81	220.7	1.92	0.71	1473.
100	4.95	32.80	99	25.97	205.8	2.45	1.18	1470.
125	4.67	32.97	124	26.13	190.3	2.96	1.76	1469.
150	4.07	33.59	149	26.68	138.1	3.36	2.32	1468.
175	3.94	33.69	174	26.77	129.7	3.69	2.87	1468.
200	3.87	33.73	199	26.81	126.1	4.01	3.48	1468.
225	3.80	33.78	223	26.86	121.7	4.32	4.15	1468.
250	3.75	33.84	248	26.91	117.0	4.62	4.87	1468.
300	3.68	33.92	298	26.98	110.7	5.19	6.46	1469.
400	3.59	34.06	397	27.10	100.0	6.23	10.17	1470.
500	3.47	34.14	496	27.18	93.3	7.20	14.60	1472.
600	3.34	34.22	595	27.26	87.0	8.10	19.63	1473.
800	3.04	34.33	793	27.37	77.0	9.73	31.23	1475.
1000	2.80	34.40	990	27.45	70.2	11.20	44.70	1477.
1200	2.56	34.46	1188	27.52	64.6	12.55	59.74	1480.



PACIFIC OCEANOGRAPHIC GROUP

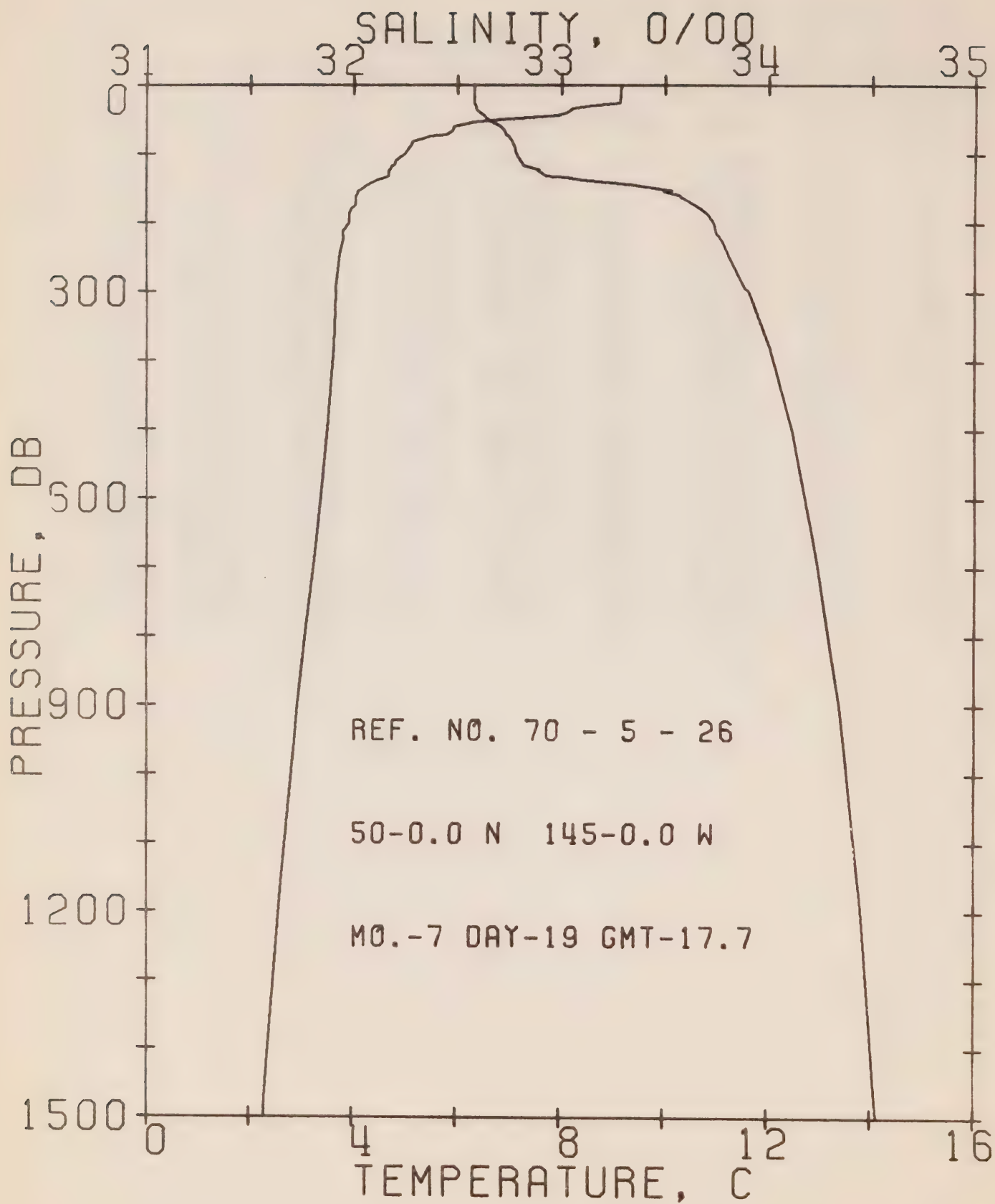
REFERENCE NO. 70- 5- 25

DATE 18/ 7/70

POSITION 50- 0.0N, 145- 0.0W GMT 17.7

RESULTS OF STD CAST 31 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	9.13	32.57	0	25.22	275.6	0.0	0.0	1484.
10	9.11	32.57	10	25.23	275.4	0.28	0.01	1484.
20	9.10	32.58	20	25.23	275.0	0.55	0.06	1484.
30	8.35	32.61	30	25.37	262.0	0.82	0.13	1482.
50	7.15	32.68	50	25.59	241.1	1.33	0.33	1477.
75	5.16	32.78	75	25.92	209.7	1.89	0.68	1470.
100	4.81	32.81	99	25.99	203.9	2.40	1.14	1469.
125	4.56	33.05	124	26.20	183.6	2.90	1.71	1469.
150	4.11	33.58	149	26.67	139.3	3.30	2.27	1468.
175	3.93	33.69	174	26.78	129.1	3.63	2.82	1468.
200	3.82	33.74	199	26.83	124.5	3.95	3.42	1468.
225	3.76	33.79	223	26.87	121.0	4.25	4.09	1468.
250	3.73	33.82	248	26.90	118.4	4.55	4.81	1468.
300	3.69	33.90	298	26.97	112.3	5.13	5.42	1469.
400	3.61	34.04	397	27.08	101.9	6.20	10.21	1470.
500	3.49	34.13	496	27.17	94.8	7.18	14.71	1472.
600	3.31	34.20	595	27.25	87.9	8.09	19.82	1473.
800	3.03	34.31	793	27.36	78.4	9.75	31.57	1475.
1000	2.78	34.39	990	27.44	71.3	11.25	45.23	1477.
1200	2.55	34.45	1188	27.51	65.3	12.61	60.44	1480.



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 5- 26

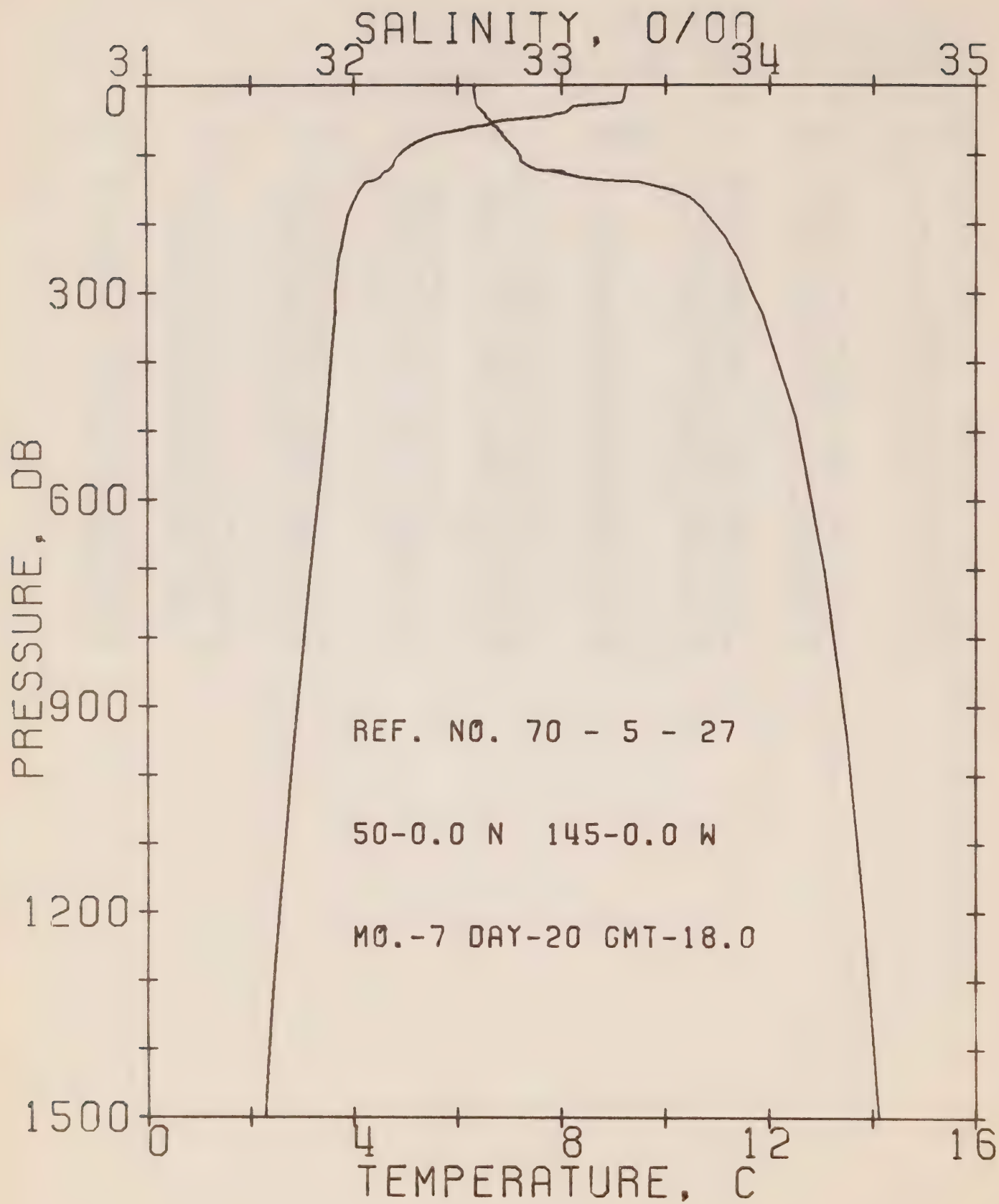
DATE 19/ 7/70

POSITION 50- 0.0N, 145- 0.0W GMT 17.7

RESULTS OF STP CAST 46 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	9.17	32.58	0	25.22	275.5	0.0	0.0	1484.
10	9.16	32.58	10	25.22	275.8	0.28	0.01	1484.
20	9.15	32.58	20	25.23	275.9	0.55	0.06	1484.
30	8.63	32.59	30	25.31	267.6	0.83	0.13	1483.
50	6.85	32.65	50	25.61	239.1	1.34	0.33	1476.
75	5.46	32.75	75	25.87	215.1	1.90	0.69	1471.
100	5.01	32.79	99	25.95	207.6	2.43	1.16	1470.
125	4.70	32.89	124	26.07	196.6	2.93	1.74	1469.
150	4.19	33.47	149	26.58	148.4	3.38	2.36	1468.
175	4.04	33.65	174	26.74	133.1	3.72	2.93	1468.
200	3.94	33.74	199	26.82	126.0	4.05	3.55	1469.
225	3.82	33.78	223	26.86	122.2	4.36	4.22	1468.
250	3.73	33.82	248	26.90	118.6	4.66	4.95	1468.
300	3.67	33.91	298	26.98	111.3	5.23	6.56	1469.
400	3.61	34.03	397	27.08	102.6	6.30	10.35	1470.
500	3.50	34.12	496	27.16	95.4	7.29	14.88	1472.
600	3.37	34.18	595	27.22	90.0	8.22	20.06	1473.
800	3.08	34.30	793	27.34	79.8	9.92	32.11	1475.
1000	2.80	34.39	990	27.44	71.6	11.42	45.89	1477.
1200	2.56	34.45	1188	27.51	64.9	12.79	61.12	1480.
1500	2.25	34.53	1484	27.60	57.5	14.62	86.21	1483.





PACIFIC OCEANOGRAPHIC GROUP

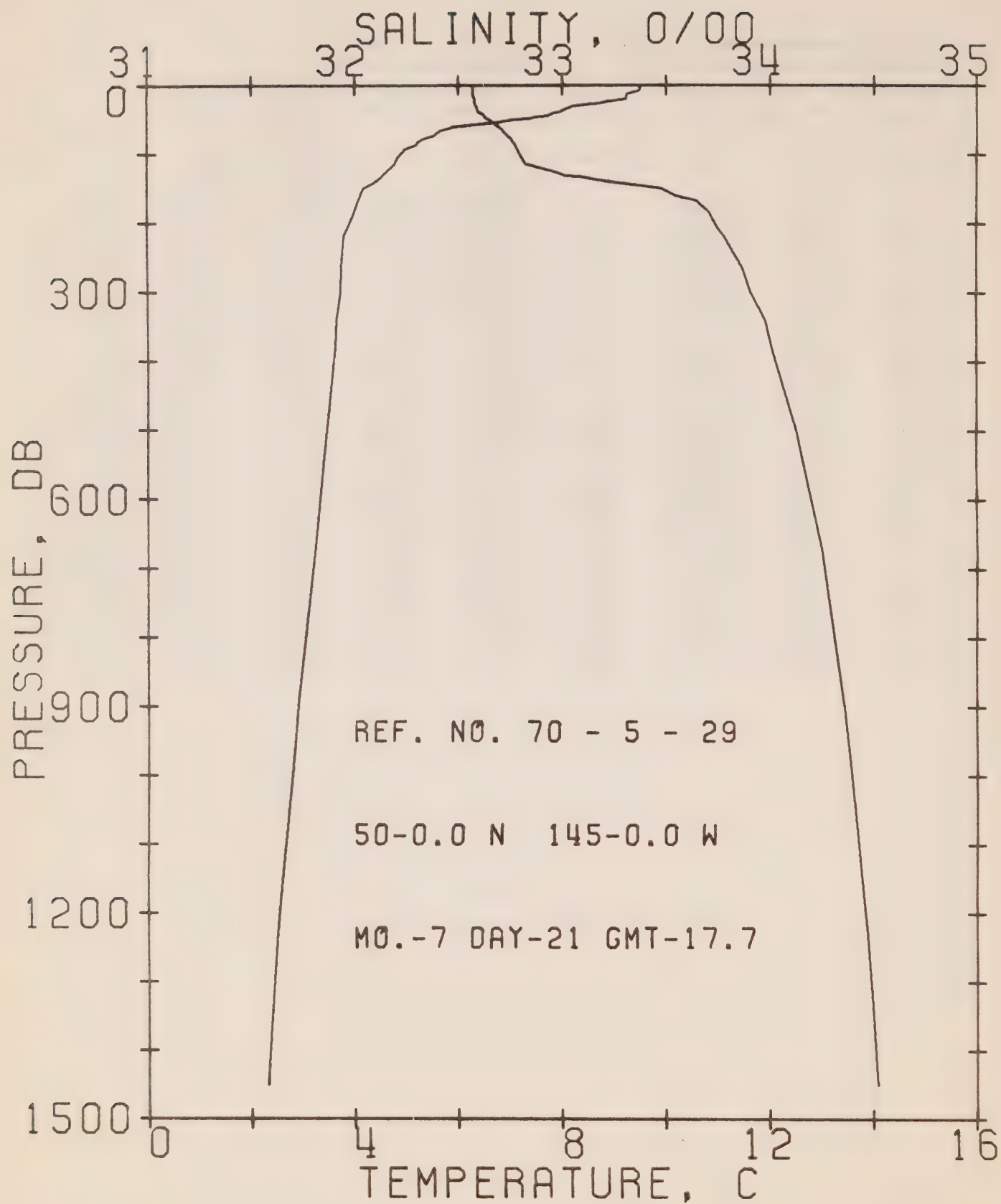
REFERENCE NO. 70- 5- 27

DATE 20/ 7/70

POSITION 50- 0.0N, 145- 0.0W GMT 18.0

RESULTS OF STP CAST 42 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	9.28	32.58	0	25.21	277.2	0.0	0.0	1485.
10	9.25	32.58	10	25.21	276.9	0.28	0.01	1485.
20	9.23	32.59	20	25.22	276.3	0.55	0.06	1485.
30	8.43	32.60	30	25.35	264.1	0.83	0.13	1482.
50	7.06	32.66	50	25.59	241.2	1.34	0.33	1477.
75	5.47	32.73	75	25.85	217.1	1.91	0.70	1471.
100	4.92	32.80	99	25.97	205.8	2.43	1.16	1469.
125	4.64	32.98	124	26.14	189.8	2.94	1.74	1469.
150	4.15	33.51	149	26.61	144.9	3.36	2.33	1468.
175	3.98	33.67	174	26.75	131.6	3.70	2.89	1468.
200	3.87	33.74	199	26.82	125.6	4.02	3.51	1468.
225	3.80	33.80	223	26.88	120.4	4.33	4.17	1468.
250	3.72	33.85	248	26.93	116.0	4.62	4.89	1468.
300	3.66	33.92	298	26.99	110.5	5.19	6.47	1469.
400	3.58	34.04	397	27.09	101.1	6.25	10.22	1470.
500	3.45	34.14	496	27.18	93.2	7.21	14.65	1472.
600	3.32	34.21	595	27.25	87.7	8.12	19.71	1473.
800	3.04	34.31	793	27.36	78.2	9.77	31.45	1475.
1000	2.78	34.40	990	27.45	70.6	11.26	45.02	1477.
1200	2.55	34.46	1188	27.52	64.5	12.61	60.11	1480.
1500	2.25	34.53	1484	27.60	57.5	14.44	85.11	1483.



PACIFIC OCEANOGRAPHIC GROUP

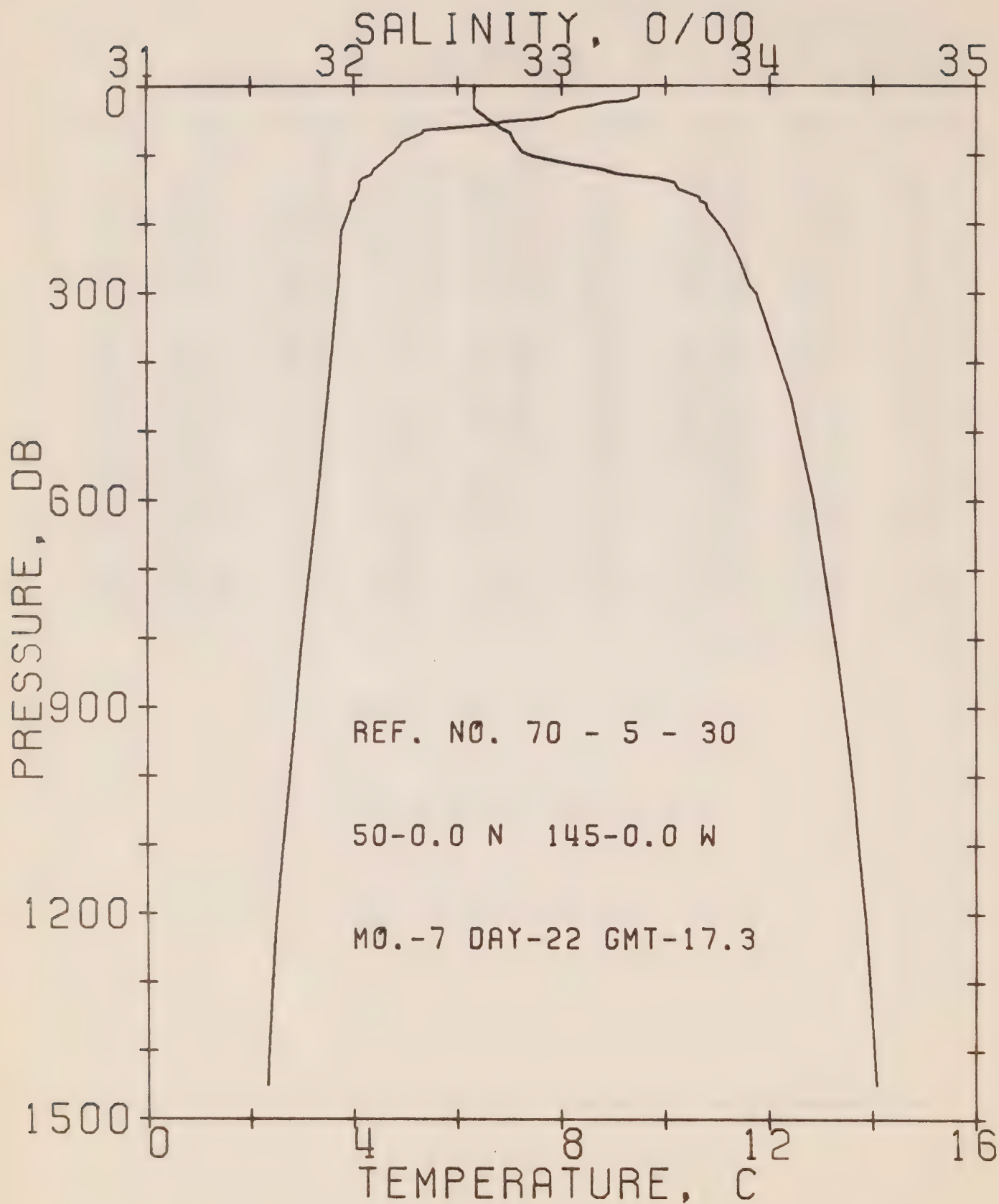
REFERENCE NO. 70- 5- 29

DATE 21/ 7/70

POSITION 50- 0.0N, 145- 0.0W GMT 17.7

RESULTS OF STD CAST 42 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	9.52	32.57	0	25.16	281.5	0.0	0.0	1486.
10	9.39	32.57	10	25.18	279.9	0.28	0.01	1485.
20	9.25	32.58	20	25.21	277.3	0.56	0.06	1485.
30	8.23	32.59	30	25.37	261.8	0.83	0.13	1481.
50	7.07	32.65	50	25.59	241.6	1.34	0.33	1477.
75	5.45	32.75	75	25.87	215.2	1.90	0.69	1471.
100	4.91	32.80	99	25.97	205.5	2.43	1.16	1469.
125	4.64	32.97	124	26.13	190.6	2.93	1.73	1469.
150	4.18	33.49	149	26.59	147.1	3.35	2.33	1468.
175	4.05	33.68	174	26.76	131.6	3.70	2.90	1468.
200	3.93	33.74	199	26.82	126.0	4.02	3.51	1468.
225	3.81	33.79	223	26.87	120.9	4.33	4.18	1468.
250	3.78	33.84	248	26.91	117.1	4.63	4.90	1468.
300	3.74	33.91	298	26.97	112.1	5.20	6.50	1469.
400	3.61	34.03	397	27.08	102.6	6.27	10.29	1470.
500	3.48	34.13	496	27.17	94.5	7.25	14.79	1472.
600	3.34	34.20	595	27.24	88.5	8.17	19.90	1473.
800	3.06	34.31	793	27.36	78.5	9.83	31.71	1475.
1000	2.79	34.39	990	27.44	70.8	11.32	45.32	1477.
1200	2.54	34.46	1188	27.52	64.3	12.67	60.40	1480.





PACIFIC OCEANOGRAPHIC GROUP

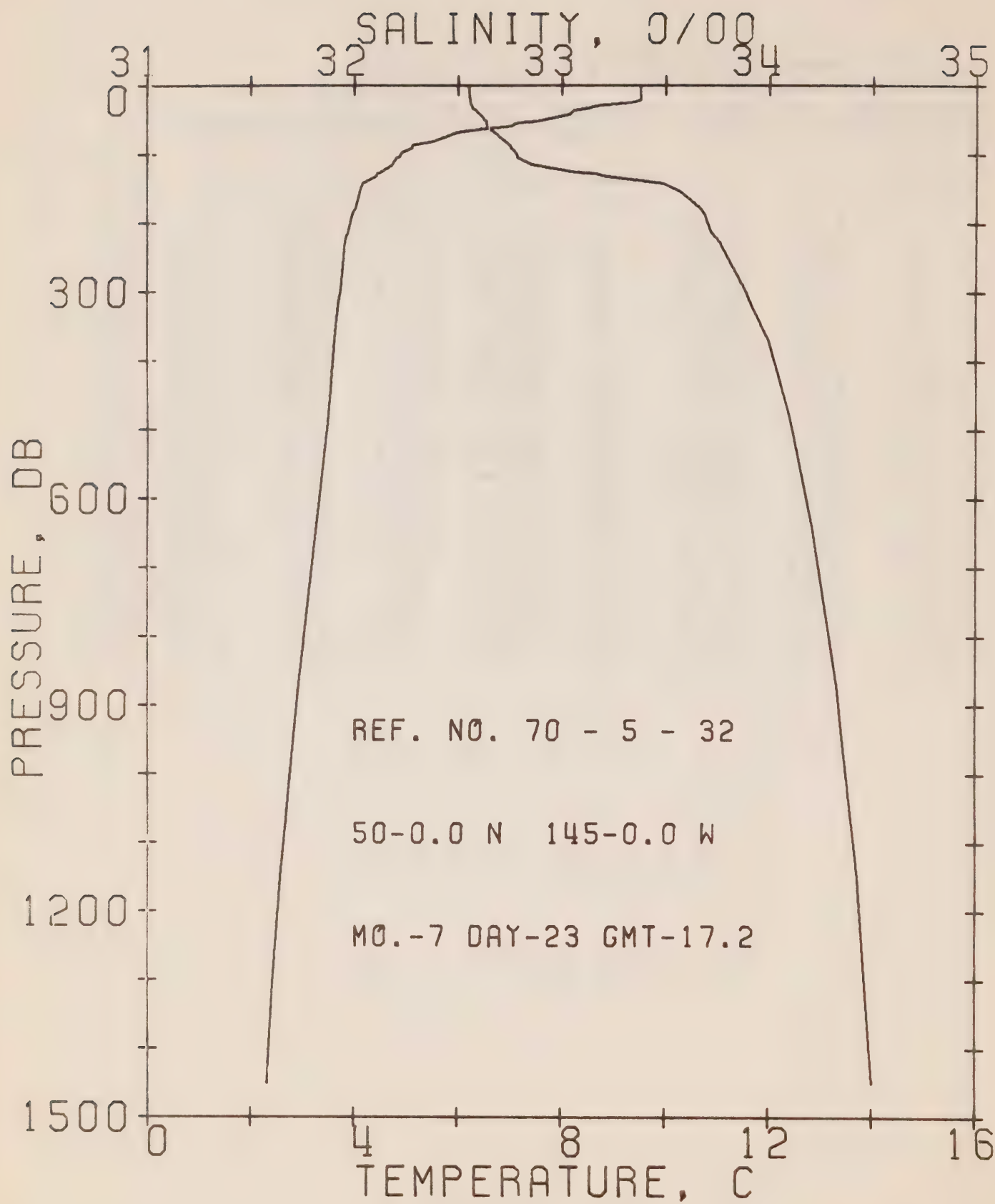
REFERENCE NO. 70- 5- 30

DATE 22/ 7/70

POSITION 50- 0.0N, 145- 0.0W GMT 17.3

RESULTS OF STP CAST 40 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	9.51	32.58	0	25.17	280.6	0.0	0.0	1485.
10	9.51	32.58	10	25.17	281.0	0.28	0.01	1486.
20	9.33	32.58	20	25.20	278.5	0.56	0.06	1485.
30	8.46	32.58	30	25.33	265.8	0.83	0.13	1482.
50	7.24	32.66	50	25.57	243.4	1.34	0.33	1478.
75	5.14	32.77	75	25.92	210.2	1.90	0.69	1470.
100	4.73	32.85	99	26.03	199.8	2.42	1.14	1469.
125	4.39	33.25	124	26.38	167.1	2.88	1.67	1468.
150	4.13	33.57	149	26.66	140.3	3.25	2.19	1468.
175	3.96	33.70	174	26.79	128.7	3.58	2.74	1468.
200	3.84	33.76	199	26.84	123.3	3.90	3.34	1468.
225	3.77	33.82	223	26.89	118.8	4.20	3.99	1468.
250	3.75	33.86	248	26.93	115.5	4.49	4.70	1468.
300	3.70	33.94	298	27.00	109.4	5.06	6.29	1469.
400	3.57	34.05	397	27.10	100.3	6.10	10.00	1470.
500	3.43	34.15	496	27.19	92.7	7.07	14.40	1471.
600	3.29	34.22	595	27.26	86.4	7.96	19.41	1473.
800	3.00	34.32	793	27.37	77.3	9.60	31.00	1475.
1000	2.75	34.40	990	27.45	69.8	11.07	44.43	1477.
1200	2.50	34.46	1188	27.53	63.7	12.40	59.34	1479.



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 5- 32

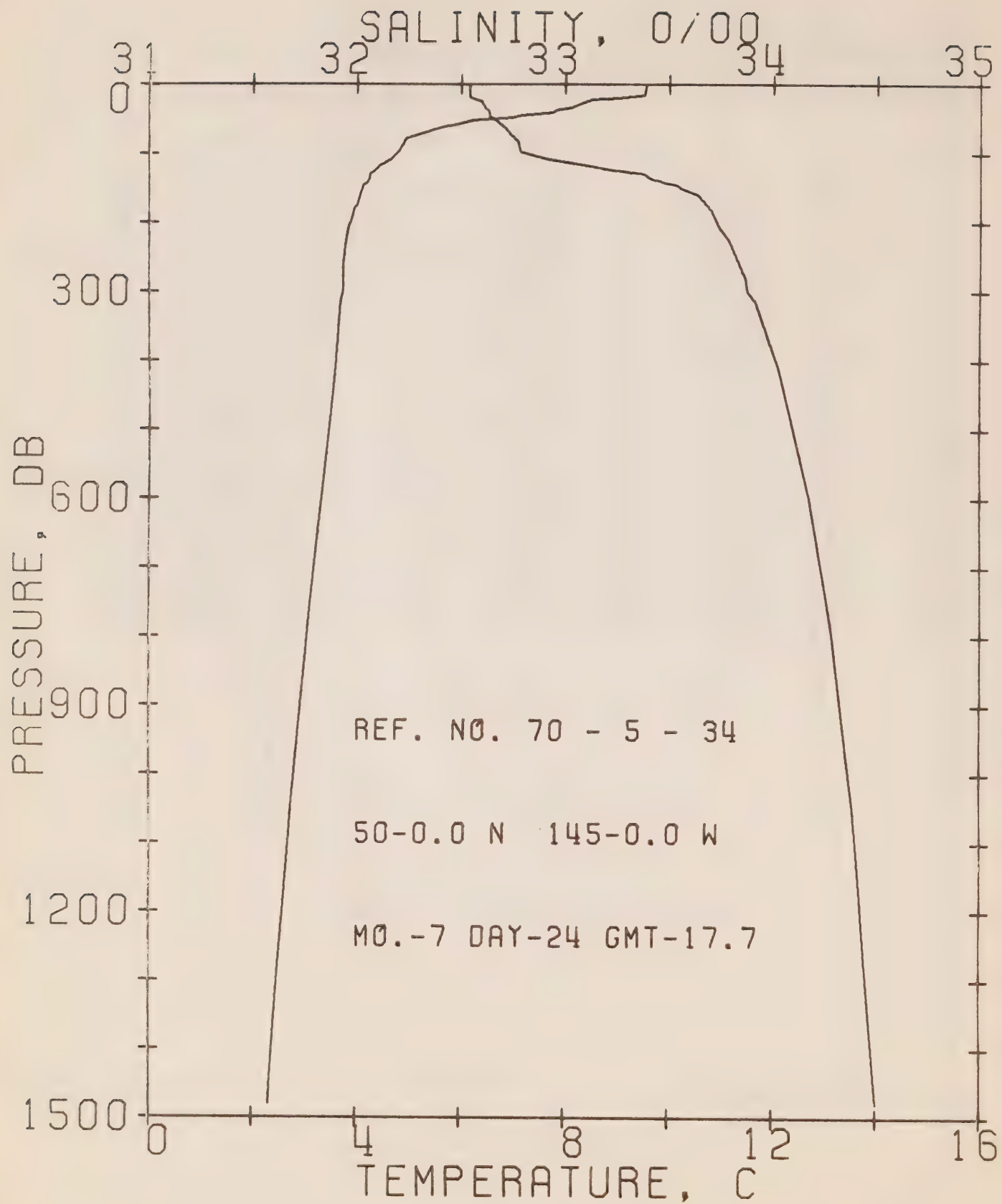
DATE 23/ 7/70

POSITION 50- 0.0N, 145- 0.0W

GMT 17.2

RESULTS OF STP CAST 37 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	9.53	32.55	0	25.14	283.2	0.0	0.0	1486.
10	9.53	32.55	10	25.15	283.2	0.28	0.01	1486.
20	9.53	32.56	20	25.15	283.1	0.57	0.06	1486.
30	8.69	32.57	30	25.29	269.9	0.84	0.13	1483.
50	7.67	32.63	50	25.49	251.0	1.37	0.34	1479.
75	5.75	32.71	75	25.80	221.9	1.95	0.71	1472.
100	4.92	32.79	99	25.96	206.9	2.49	1.19	1469.
125	4.54	33.05	124	26.21	183.3	2.98	1.76	1469.
150	4.13	33.55	149	26.64	142.0	3.38	2.31	1468.
175	4.05	33.66	174	26.74	133.1	3.72	2.87	1468.
200	3.93	33.71	199	26.79	128.5	4.05	3.50	1468.
225	3.83	33.76	223	26.84	123.9	4.36	4.18	1468.
250	3.80	33.80	248	26.88	120.3	4.67	4.92	1468.
300	3.74	33.89	298	26.96	113.4	5.25	6.55	1469.
400	3.59	34.03	397	27.08	102.6	6.33	10.37	1470.
500	3.47	34.11	496	27.16	95.5	7.32	14.90	1472.
600	3.33	34.18	595	27.23	89.7	8.24	20.08	1473.
800	3.04	34.29	793	27.34	79.8	9.94	32.08	1475.
1000	2.77	34.38	990	27.43	71.9	11.45	45.90	1477.
1200	2.52	34.44	1188	27.51	65.5	12.82	61.21	1479.



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 5- 34

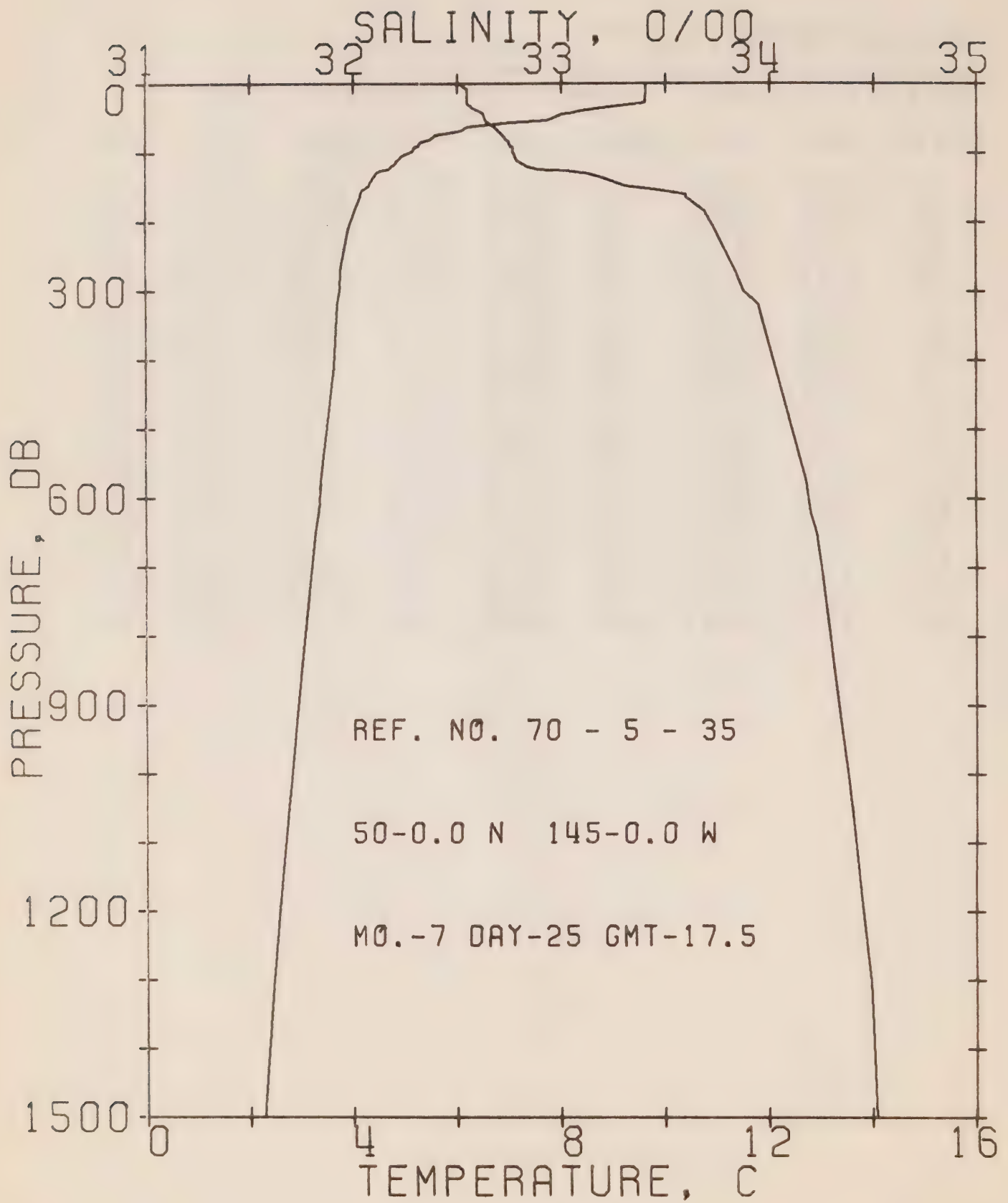
DATE 24/ 7/70

POSITION 50- 0.0N, 145- 0.0W GMT 17.7

RESULTS OF STD CAST 41 POINTS TAKEN FROM ANALOG TRACE

PFSS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	9.59	32.54	0	25.12	284.9	0.0	0.0	1486.
10	9.56	32.54	10	25.13	284.9	0.28	0.01	1486.
20	9.05	32.55	20	25.22	276.5	0.57	0.06	1484.
30	8.27	32.61	30	25.39	260.6	0.83	0.13	1481.
50	6.63	32.66	50	25.65	235.6	1.33	0.33	1475.
75	5.11	32.75	75	25.91	211.4	1.89	0.68	1470.
100	4.79	32.81	99	25.99	203.5	2.41	1.14	1469.
125	4.36	33.25	124	26.38	166.7	2.87	1.67	1468.
150	4.12	33.56	149	26.65	141.3	3.25	2.20	1468.
175	4.02	33.68	174	26.76	130.9	3.59	2.76	1468.
200	3.90	33.73	199	26.81	126.2	3.91	3.37	1468.
225	3.80	33.79	223	26.87	121.3	4.22	4.04	1468.
250	3.76	33.83	248	26.90	118.3	4.52	4.77	1468.
300	3.74	33.88	298	26.95	114.3	5.10	6.39	1469.
400	3.61	34.02	397	27.07	103.4	6.18	10.23	1470.
500	3.48	34.10	496	27.15	96.5	7.18	14.79	1472.
600	3.34	34.18	595	27.22	90.0	8.11	20.00	1473.
800	3.05	34.29	793	27.34	80.3	9.81	32.06	1475.
1000	2.80	34.37	990	27.42	72.8	11.34	46.03	1477.
1200	2.58	34.43	1188	27.49	67.1	12.73	61.63	1480.





PACIFIC OCEANOGRAPHIC GROUP

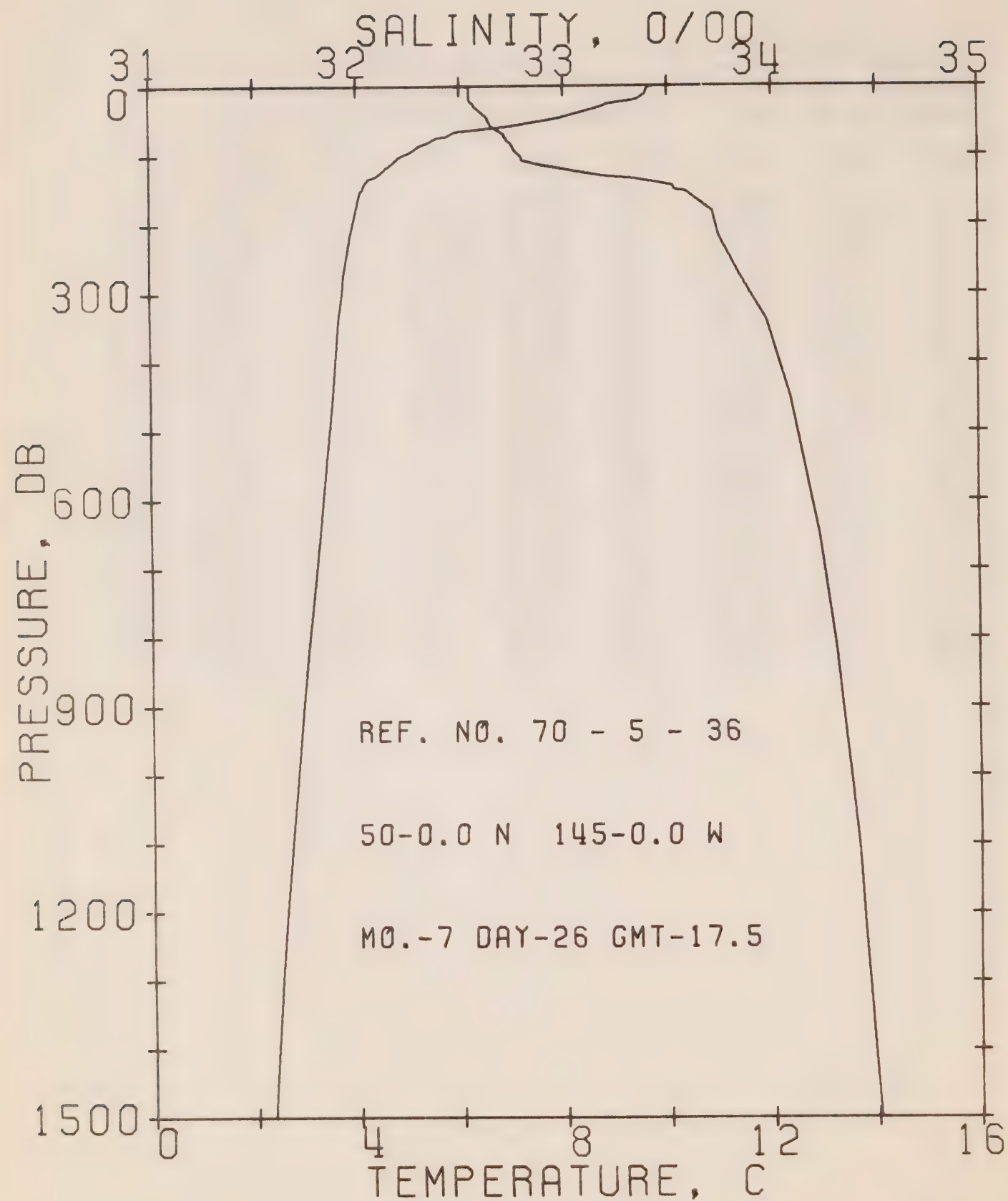
REFERENCE NO. 70- 5- 35

DATE 25/ 7/70

POSITION 50- 0.0N, 145- 0.0W GMT 17.5

RESULTS OF STP CAST 43 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	9.64	32.51	0	25.09	287.9	0.0	0.0	1486.
10	9.64	32.55	10	25.12	285.3	0.29	0.01	1486.
20	9.63	32.55	20	25.13	285.4	0.57	0.06	1486.
30	9.39	32.56	30	25.17	281.3	0.86	0.13	1486.
50	7.85	32.64	50	25.47	253.3	1.38	0.34	1480.
75	5.58	32.72	75	25.83	218.8	1.97	0.71	1472.
100	5.08	32.77	99	25.93	209.5	2.50	1.19	1470.
125	4.61	32.96	124	26.13	190.8	3.01	1.78	1469.
150	4.27	33.36	149	26.48	157.2	3.44	2.37	1468.
175	4.09	33.65	174	26.73	134.2	3.79	2.95	1468.
200	3.97	33.72	199	26.80	127.7	4.12	3.58	1468.
225	3.88	33.76	223	26.84	123.7	4.43	4.26	1468.
250	3.81	33.81	248	26.88	120.1	4.74	4.99	1469.
300	3.75	33.88	298	26.95	114.4	5.32	6.63	1469.
400	3.63	34.02	397	27.07	103.3	6.39	10.44	1470.
500	3.48	34.11	496	27.16	95.8	7.39	14.99	1472.
600	3.35	34.19	595	27.23	89.2	8.31	20.15	1473.
800	3.07	34.30	793	27.34	79.9	9.99	32.10	1475.
1000	2.81	34.38	990	27.43	72.2	11.51	45.98	1477.
1200	2.58	34.45	1188	27.51	65.2	12.88	61.31	1480.
1500	2.25	34.52	1484	27.59	58.2	14.72	86.47	1483.



PACIFIC OCEANOGRAPHIC GROUP

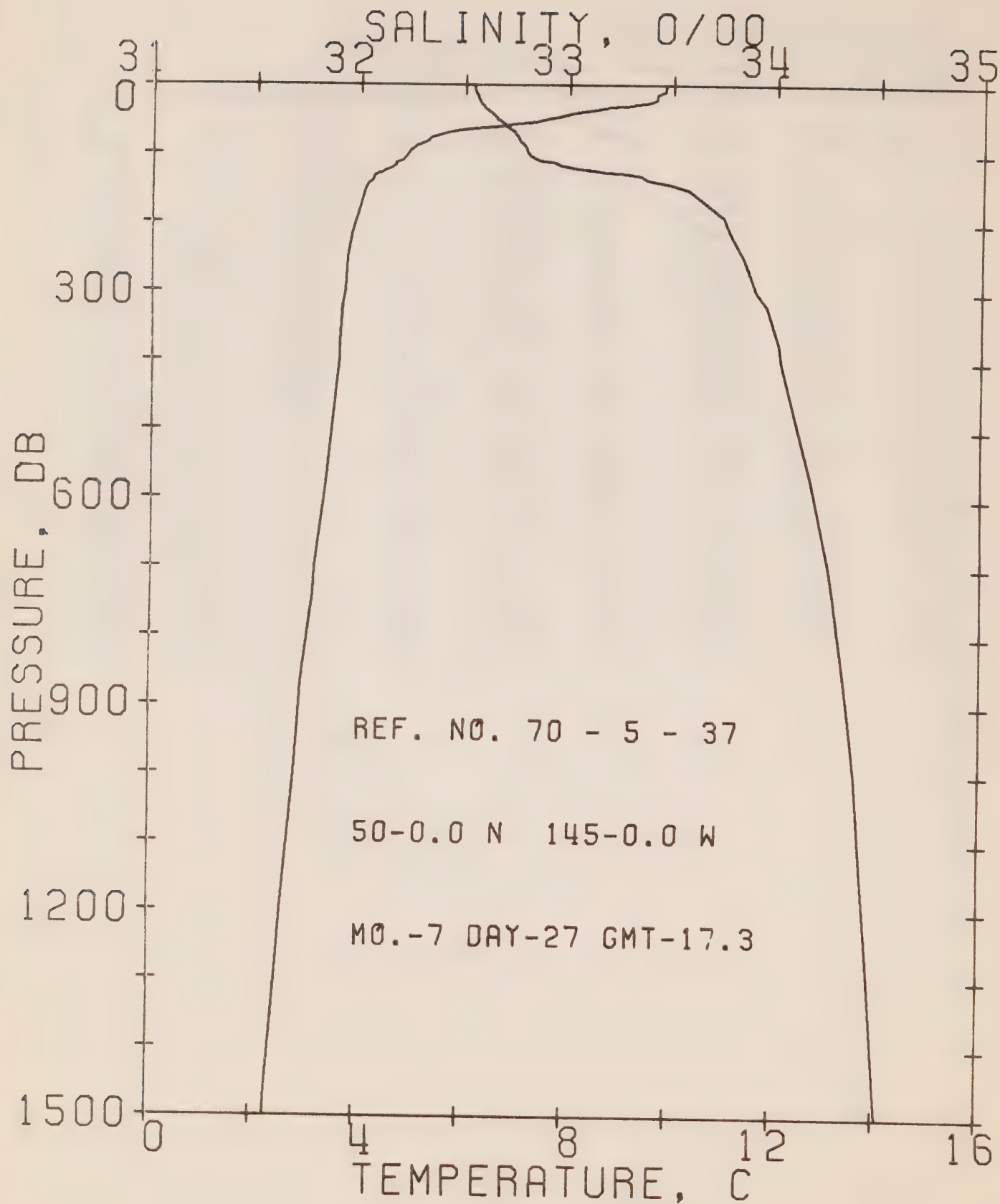
REFERENCE NO. 70- 5- 36

DATE 26/ 7/70

POSITION 50- 0.0N, 145- 0.0W GMT 17.5

RESULTS OF STP CAST 35 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	9.76	32.53	0	25.09	288.3	0.0	0.0	1486.
10	9.61	32.55	10	25.13	284.9	0.29	0.01	1486.
20	9.43	32.55	20	25.16	282.2	0.57	0.06	1485.
30	8.75	32.58	30	25.29	270.0	0.84	0.13	1483.
50	7.63	32.65	50	25.50	249.6	1.36	0.34	1479.
75	5.57	32.73	75	25.84	218.0	1.95	0.71	1472.
100	4.91	32.79	99	25.96	206.2	2.48	1.18	1469.
125	4.50	33.10	124	26.25	179.4	2.97	1.74	1468.
150	4.13	33.54	149	26.64	142.5	3.36	2.28	1468.
175	4.02	33.69	174	26.77	130.4	3.69	2.84	1468.
200	3.95	33.73	199	26.81	126.5	4.01	3.45	1468.
225	3.88	33.76	223	26.84	123.9	4.33	4.13	1468.
250	3.82	33.81	248	26.88	120.2	4.63	4.87	1469.
300	3.73	33.90	298	26.96	112.7	5.21	6.50	1469.
400	3.59	34.04	397	27.09	101.6	6.28	10.27	1470.
500	3.47	34.12	496	27.17	94.6	7.25	14.75	1472.
600	3.34	34.19	595	27.24	88.9	8.17	19.88	1473.
800	3.06	34.30	793	27.35	79.4	9.85	31.80	1475.
1000	2.81	34.37	990	27.43	72.6	11.37	45.66	1477.
1200	2.58	34.43	1188	27.50	66.7	12.76	61.19	1480.
1500	2.29	34.51	1484	27.58	59.4	14.65	87.12	1484.





PACIFIC OCEANOGRAPHIC GROUP

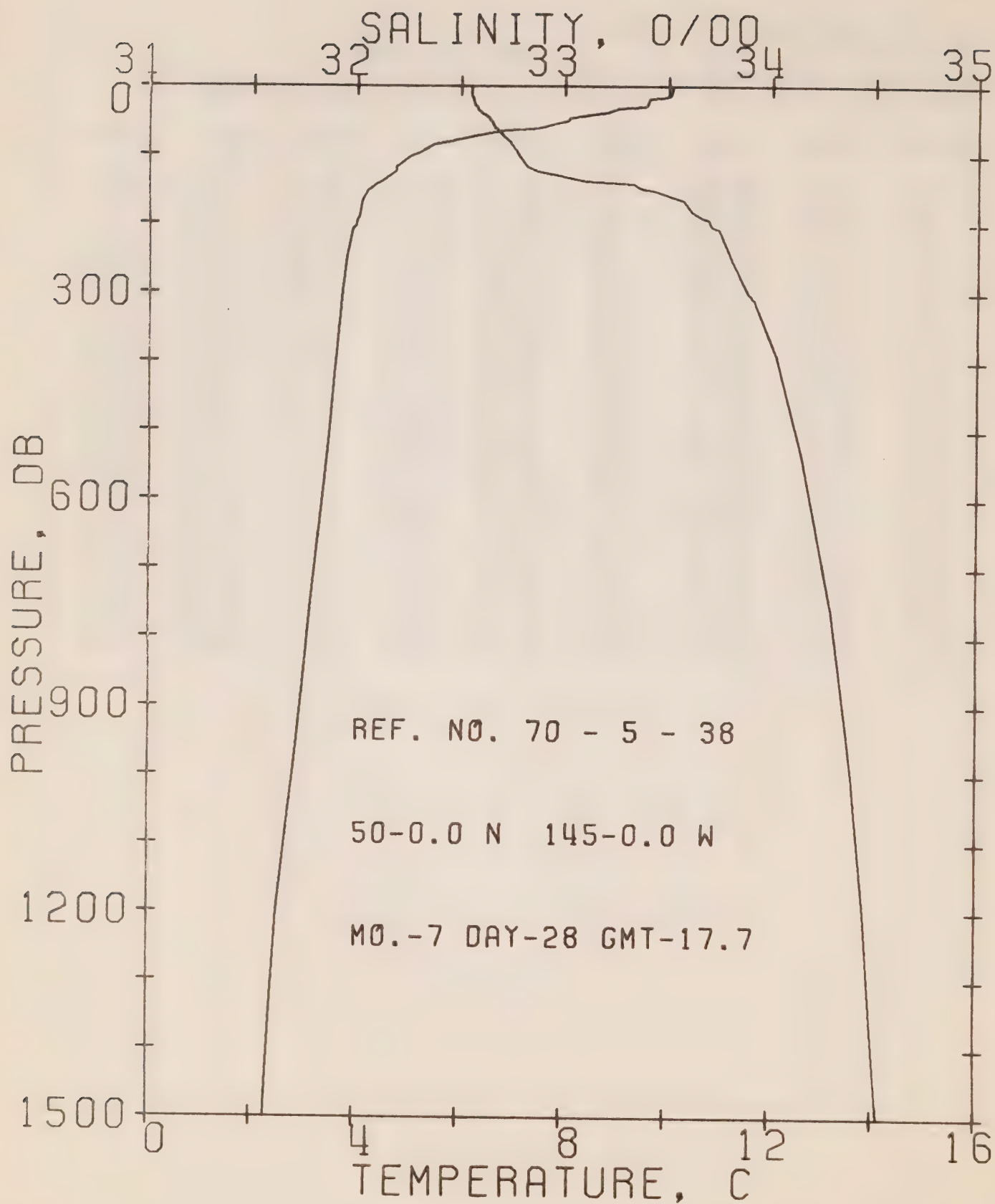
REFERENCE NO. 70- 5- 37

DATE 27/ 7/70

POSITION 50- 0.0N, 145- 0.0W GMT 17.3

RESULTS OF STP CAST 48 POINTS TAKEN FROM ANALOG TRACE.

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	9.87	32.54	0	25.08	289.3	0.0	0.0	1487.
10	9.85	32.55	10	25.09	288.6	0.29	0.01	1487.
20	9.69	32.57	20	25.13	285.0	0.58	0.06	1486.
30	9.27	32.59	30	25.21	277.0	0.86	0.13	1485.
50	7.57	32.66	50	25.52	247.8	1.38	0.34	1479.
75	5.42	32.76	75	25.88	214.2	1.95	0.70	1471.
100	4.94	32.81	99	25.97	205.2	2.47	1.17	1469.
125	4.47	33.14	124	26.29	175.8	2.96	1.73	1468.
150	4.12	33.56	149	26.65	141.2	3.35	2.27	1468.
175	4.02	33.68	174	26.76	131.3	3.69	2.83	1468.
200	3.93	33.76	199	26.83	124.3	4.01	3.44	1468.
225	3.84	33.80	223	26.87	120.7	4.31	4.10	1468.
250	3.78	33.85	248	26.92	116.8	4.61	4.82	1468.
300	3.73	33.91	298	26.97	112.0	5.18	6.42	1469.
400	3.63	34.03	397	27.08	102.7	6.24	10.18	1471.
500	3.49	34.12	496	27.16	95.5	7.23	14.71	1472.
600	3.35	34.20	595	27.24	88.5	8.15	19.85	1473.
800	3.05	34.32	793	27.36	78.1	9.80	31.62	1475.
1000	2.81	34.40	990	27.45	70.6	11.29	45.17	1477.
1200	2.57	34.45	1188	27.51	65.4	12.65	60.37	1480.
1500	2.26	34.52	1484	27.59	58.3	14.50	85.73	1483.



PACIFIC OCEANOGRAPHIC GROUP

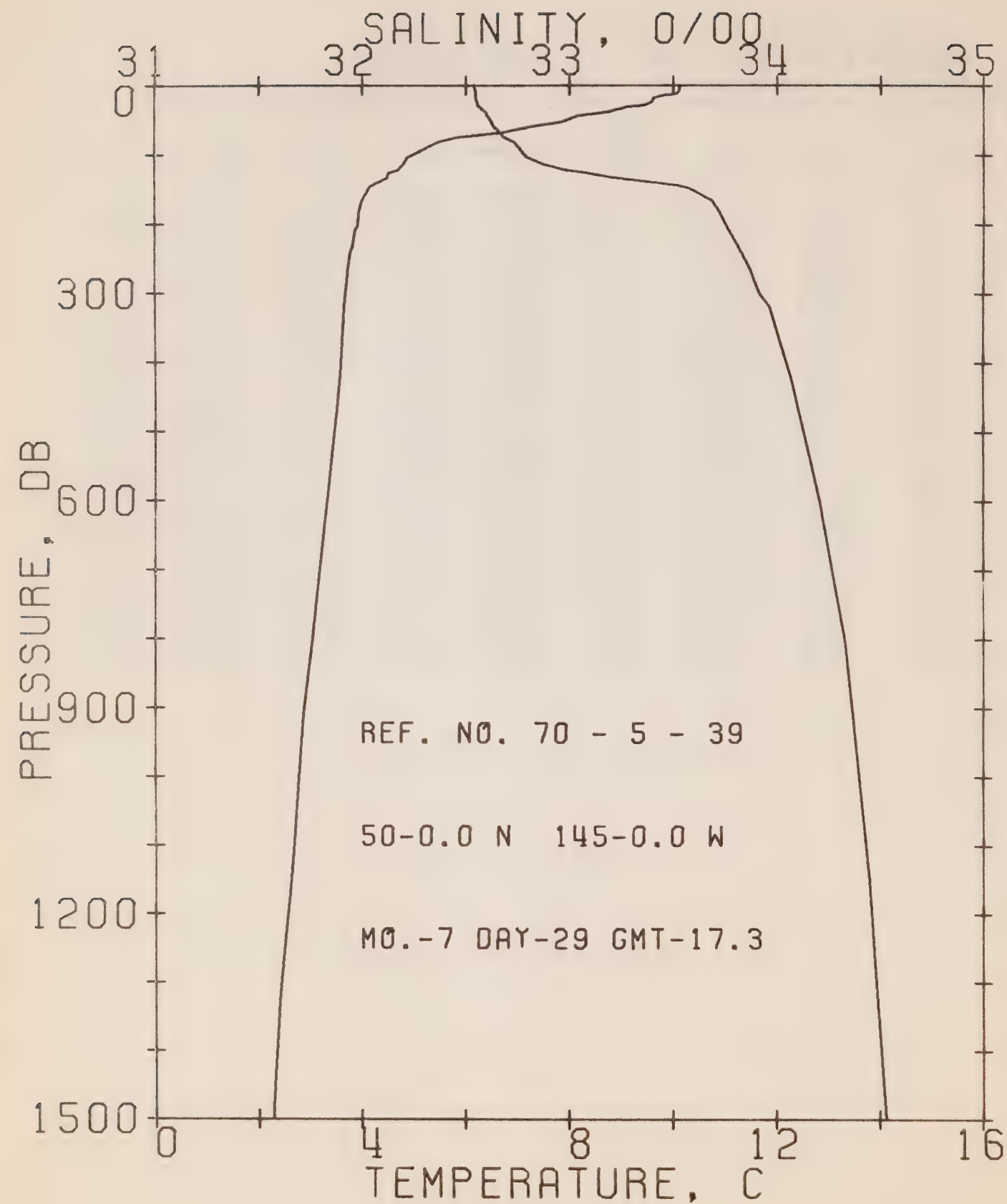
REFERENCE NO. 70- 5- 38

DATE 28/ 7/70

POSITION 50- 0.0N, 145- 0.0W GMT 17.7

RESULTS OF STP CAST 41 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	10.10	32.55	0	25.05	292.1	0.0	0.0	1488.
10	10.08	32.55	10	25.05	292.2	0.29	0.01	1488.
20	9.64	32.56	20	25.13	284.6	0.58	0.06	1486.
30	9.56	32.58	30	25.16	282.2	0.87	0.13	1486.
50	8.09	32.65	50	25.44	255.7	1.40	0.35	1481.
75	6.13	32.72	75	25.76	225.3	2.00	0.73	1474.
100	5.12	32.79	99	25.93	209.0	2.54	1.21	1470.
125	4.75	32.90	124	26.06	197.1	3.05	1.79	1469.
150	4.26	33.40	149	26.52	154.1	3.49	2.40	1468.
175	4.10	33.60	174	26.69	137.8	3.85	3.00	1468.
200	4.01	33.71	199	26.78	129.1	4.18	3.64	1468.
225	3.89	33.77	223	26.85	123.1	4.49	4.31	1468.
250	3.81	33.81	248	26.88	119.8	4.80	5.05	1469.
300	3.73	33.89	298	26.96	113.4	5.38	6.68	1469.
400	3.62	34.04	397	27.08	102.0	6.45	10.48	1470.
500	3.50	34.12	496	27.16	95.0	7.44	14.98	1472.
600	3.36	34.20	595	27.23	89.0	8.35	20.12	1473.
800	3.08	34.32	793	27.36	78.4	10.02	31.95	1475.
1000	2.81	34.40	990	27.45	70.6	11.51	45.54	1477.
1200	2.51	34.46	1188	27.52	64.0	12.86	60.56	1479.
1500	2.25	34.53	1484	27.60	57.5	14.68	85.48	1483.



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 5- 39

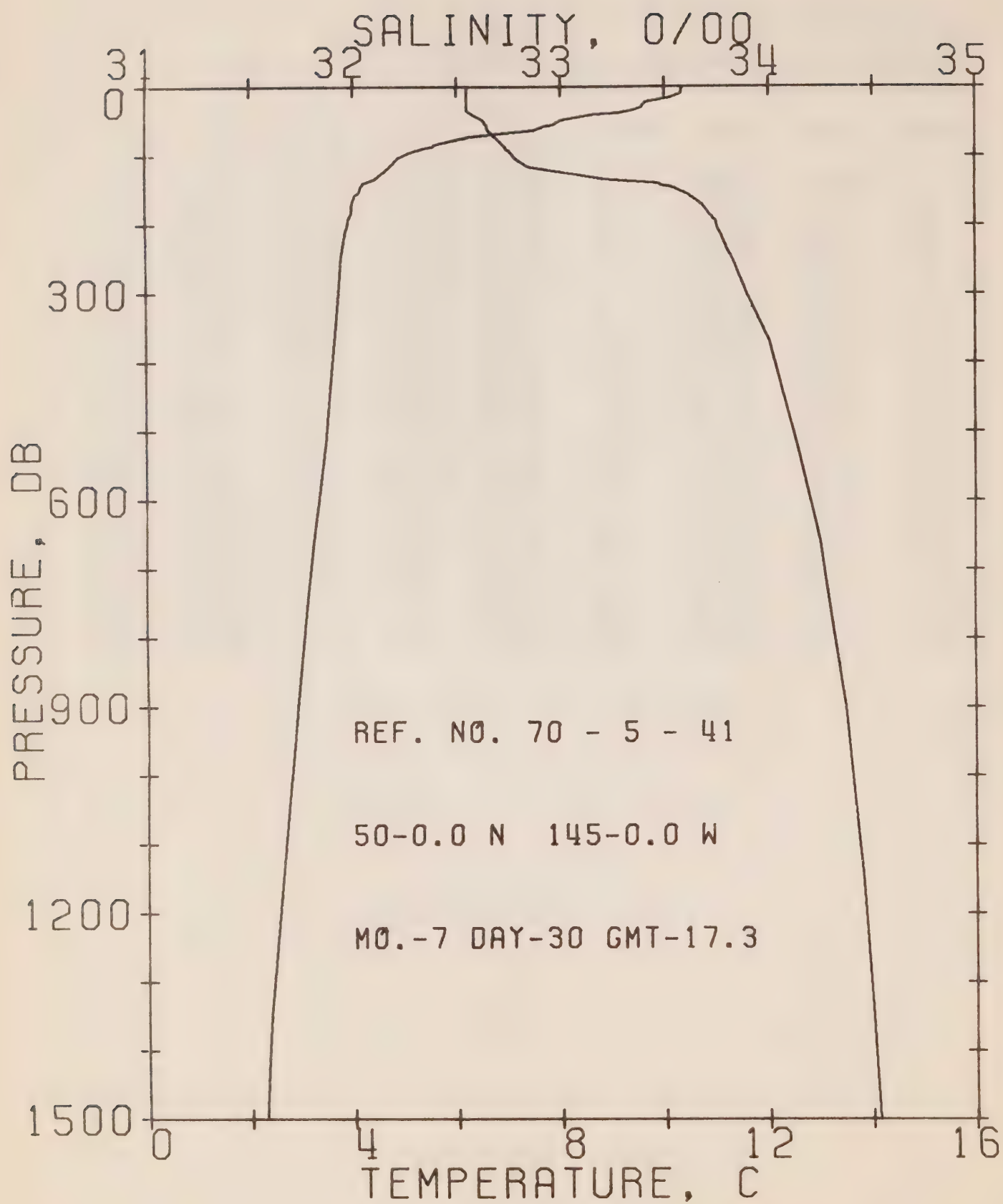
DATE 29/ 7/70

POSITION 50- 0.0N, 145- 0.0W GMT 17.3

RESULTS OF STP CAST 38 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	10.16	32.54	0	25.03	293.8	0.0	0.0	1488.
10	10.12	32.55	10	25.04	292.9	0.29	0.01	1488.
20	9.64	32.55	20	25.13	285.2	0.58	0.06	1486.
30	9.29	32.56	30	25.19	279.2	0.87	0.13	1485.
50	7.97	32.62	50	25.44	256.0	1.40	0.35	1481.
75	5.83	32.69	75	25.77	224.0	2.00	0.73	1473.
100	5.00	32.79	99	25.95	207.5	2.54	1.21	1470.
125	4.57	33.05	124	26.21	183.2	3.03	1.77	1469.
150	4.14	33.59	149	26.68	138.7	3.43	2.33	1468.
175	3.98	33.71	174	26.79	128.5	3.77	2.88	1468.
200	3.93	33.76	199	26.83	124.7	4.08	3.48	1468.
225	3.85	33.80	223	26.87	120.6	4.39	4.15	1468.
250	3.77	33.85	248	26.92	116.6	4.68	4.86	1468.
300	3.70	33.92	298	26.98	110.9	5.25	6.45	1469.
400	3.61	34.05	397	27.10	101.0	6.30	10.18	1470.
500	3.47	34.13	496	27.17	94.2	7.28	14.64	1472.
600	3.33	34.21	595	27.25	87.7	8.19	19.73	1473.
800	3.04	34.33	793	27.37	77.0	9.83	31.37	1475.
1000	2.78	34.40	990	27.45	70.3	11.30	44.81	1477.
1200	2.56	34.46	1188	27.52	64.5	12.65	59.85	1480.
1500	2.26	34.53	1484	27.60	57.6	14.48	84.93	1433.





PACIFIC OCEANOGRAPHIC GROUP

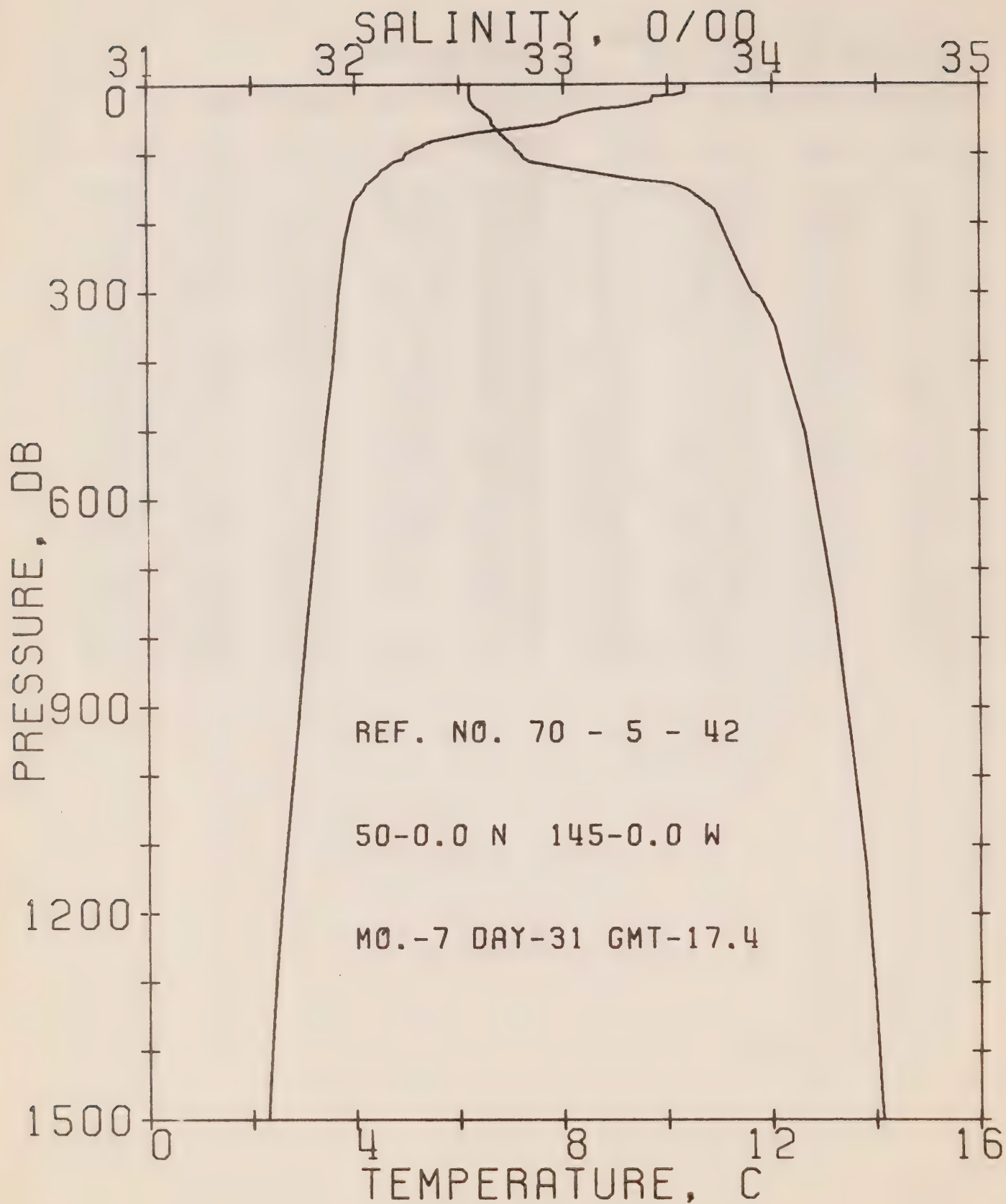
REFERENCE NO. 70- 5- 41

DATE 30/ 7/70

POSITION 50- 0.0N, 145- 0.0W GMT 17.3

RESULTS OF STP CAST 41 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	10.36	32.55	0	25.00	296.2	0.0	0.0	1489.
10	10.34	32.55	10	25.01	296.4	0.30	0.02	1489.
20	9.83	32.55	20	25.09	288.4	0.59	0.06	1487.
30	9.58	32.55	30	25.13	284.7	0.88	0.13	1486.
50	8.00	32.64	50	25.44	255.5	1.42	0.35	1481.
75	6.12	32.70	75	25.75	226.7	2.03	0.74	1474.
100	5.00	32.78	99	25.94	208.2	2.57	1.22	1470.
125	4.61	33.04	124	26.19	184.8	3.07	1.79	1469.
150	4.17	33.58	149	26.66	140.2	3.47	2.35	1468.
175	4.00	33.70	174	26.78	129.6	3.80	2.90	1468.
200	3.92	33.76	199	26.83	124.6	4.12	3.51	1468.
225	3.85	33.79	223	26.87	121.5	4.43	4.18	1468.
250	3.79	33.83	248	26.90	117.9	4.73	4.90	1468.
300	3.73	33.90	298	26.96	112.7	5.30	6.51	1469.
400	3.62	34.04	397	27.08	102.1	6.37	10.31	1470.
500	3.50	34.12	496	27.16	95.2	7.36	14.82	1472.
600	3.34	34.20	595	27.24	88.3	8.28	19.95	1473.
800	3.05	34.32	793	27.36	77.8	9.93	31.67	1475.
1000	2.79	34.40	990	27.45	70.1	11.40	45.13	1477.
1200	2.55	34.46	1188	27.52	64.2	12.74	60.12	1480.
1500	2.25	34.53	1484	27.60	57.5	14.56	85.06	1483.



PACIFIC OCEANOGRAPHIC GROUP

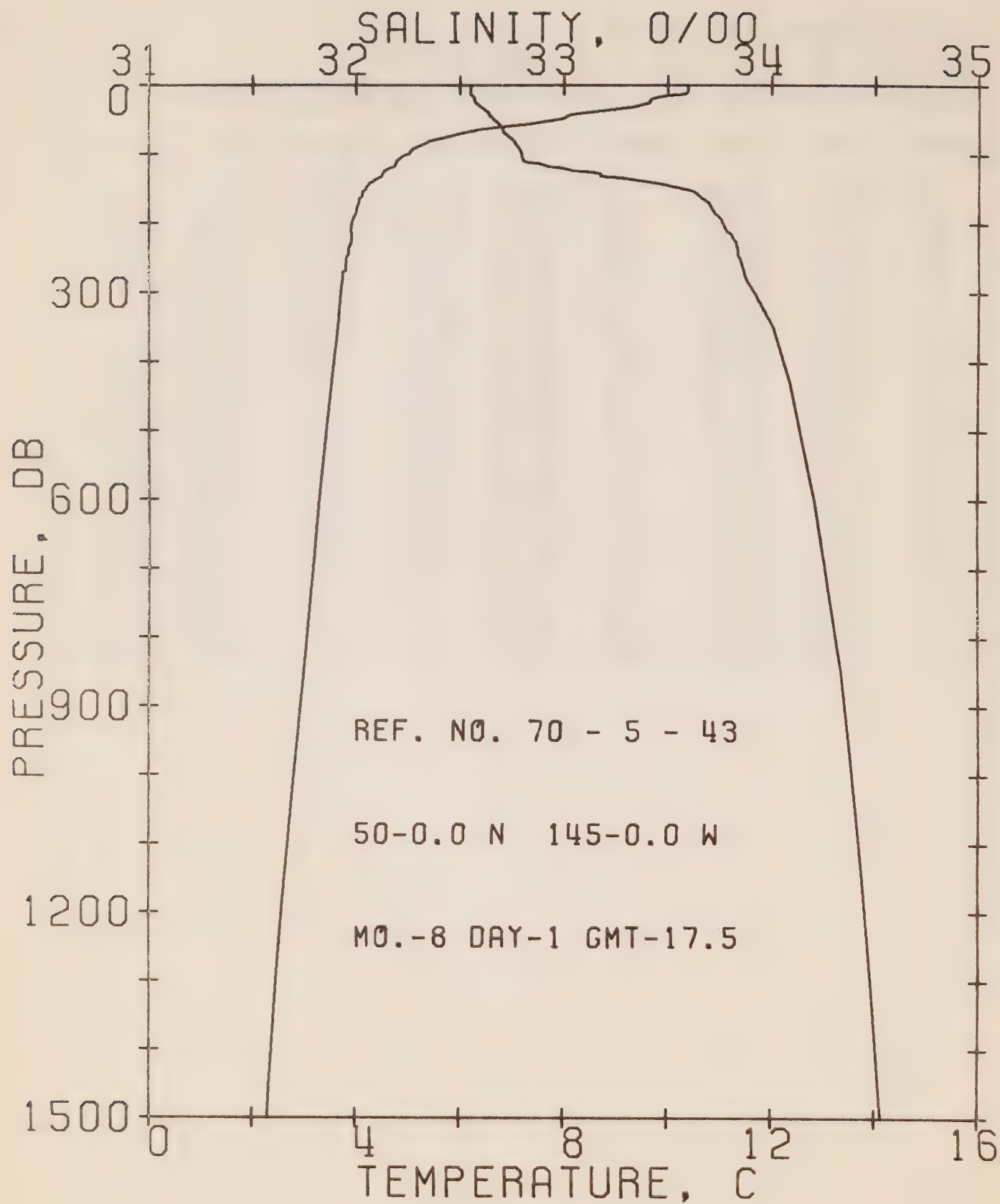
REFERENCE NO. 70- 5- 42

DATE 31/ 7/70

POSITION 50- 0.0N, 145- 0.0W GMT 17.4

RESULTS OF STP CAST 41 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	10.35	32.55	0	25.01	296.2	0.0	0.0	1489.
10	10.35	32.55	10	25.01	296.6	0.30	0.02	1489.
20	9.74	32.55	20	25.11	286.8	0.59	0.06	1487.
30	9.41	32.57	30	25.18	280.6	0.87	0.13	1486.
50	7.96	32.65	50	25.46	253.5	1.40	0.35	1481.
75	6.01	32.72	75	25.77	224.1	2.00	0.73	1473.
100	5.02	32.80	99	25.96	207.0	2.54	1.20	1470.
125	4.54	33.10	124	26.24	179.7	3.03	1.77	1469.
150	4.20	33.58	149	26.66	140.4	3.43	2.32	1468.
175	3.99	33.70	174	26.78	129.3	3.77	2.88	1468.
200	3.90	33.76	199	26.83	124.4	4.08	3.48	1468.
225	3.83	33.79	223	26.87	121.3	4.39	4.15	1468.
250	3.78	33.83	248	26.90	118.2	4.69	4.87	1468.
300	3.70	33.91	298	26.97	111.7	5.26	6.48	1469.
400	3.58	34.06	397	27.11	99.9	6.31	10.18	1470.
500	3.43	34.16	496	27.20	91.6	7.26	14.56	1471.
600	3.30	34.22	595	27.26	86.9	8.16	19.55	1473.
800	3.04	34.32	793	27.36	77.8	9.80	31.21	1475.
1000	2.78	34.40	990	27.45	70.4	11.28	44.73	1477.
1200	2.55	34.47	1188	27.52	63.9	12.62	59.69	1480.
1500	2.27	34.53	1484	27.60	57.7	14.44	84.66	1483.





PACIFIC OCEANOGRAPHIC GROUP

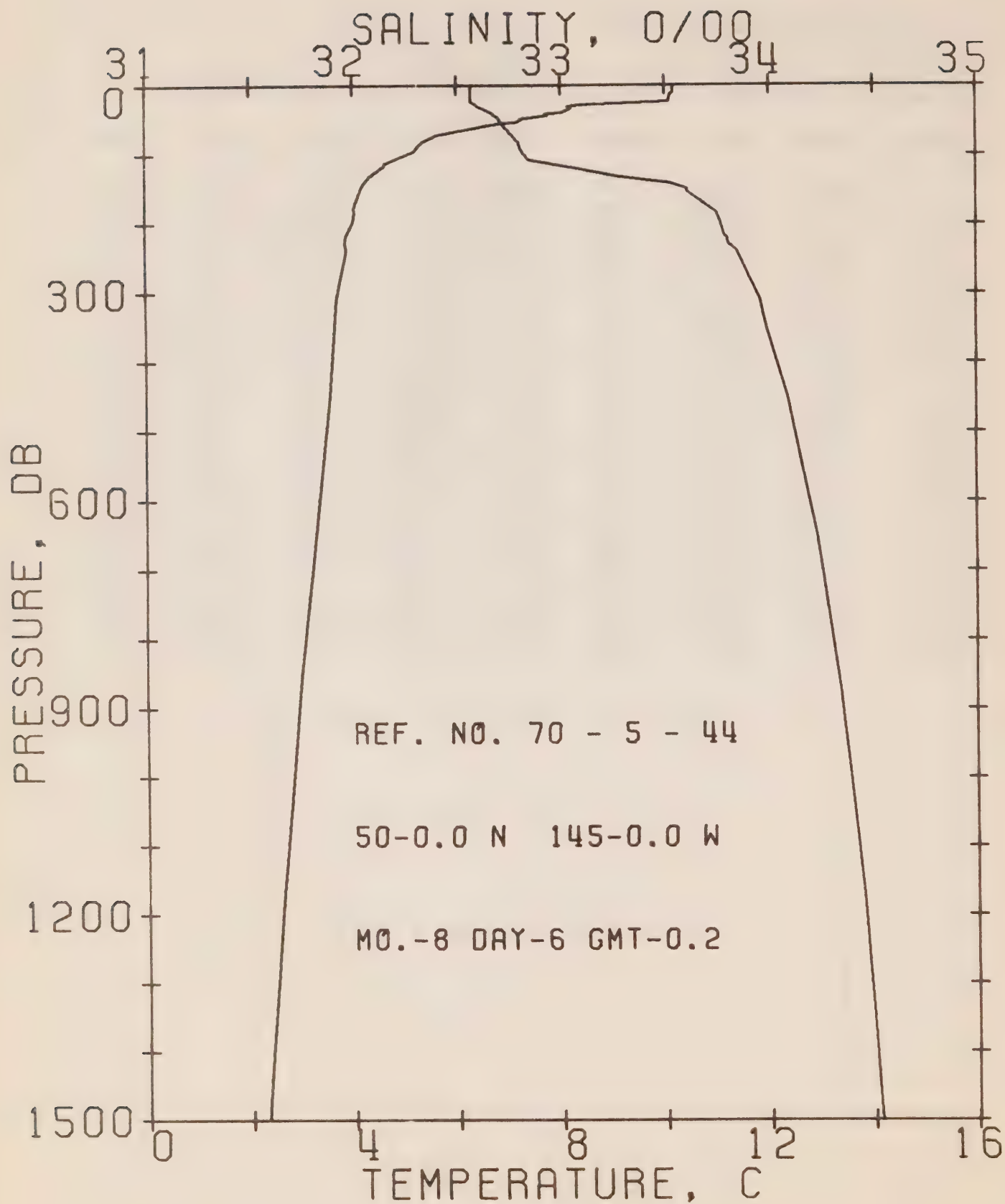
REFERENCE NO. 70- 5- 43

DATE 1/ 8/70

POSITION 50- 0.0N, 145- 0.0W GMT 17.5

RESULTS OF STP CAST 61 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	10.40	32.55	0	25.00	297.0	0.0	0.0	1489.
10	10.40	32.55	10	25.00	297.4	0.30	0.02	1489.
20	9.70	32.57	20	25.13	284.9	0.59	0.06	1486.
30	9.44	32.60	30	25.19	279.1	0.87	0.13	1486.
50	7.85	32.67	50	25.49	251.1	1.40	0.34	1480.
75	5.75	32.74	75	25.82	219.4	1.98	0.71	1472.
100	4.99	32.80	99	25.96	206.7	2.51	1.19	1470.
125	4.55	33.09	124	26.24	180.1	3.00	1.75	1469.
150	4.19	33.58	149	26.66	140.1	3.40	2.31	1468.
175	4.04	33.71	174	26.78	129.1	3.74	2.86	1468.
200	3.93	33.77	199	26.84	123.6	4.05	3.46	1468.
225	3.91	33.83	223	26.89	119.4	4.36	4.12	1469.
250	3.82	33.85	248	26.92	117.0	4.65	4.83	1469.
300	3.71	33.92	298	26.98	111.0	5.22	6.44	1469.
400	3.58	34.06	397	27.11	100.0	6.27	10.16	1470.
500	3.44	34.14	496	27.18	93.4	7.23	14.57	1471.
600	3.30	34.21	595	27.25	87.3	8.14	19.62	1473.
800	3.06	34.31	793	27.36	78.5	9.80	31.36	1475.
1000	2.80	34.39	990	27.44	71.2	11.29	45.00	1477.
1200	2.57	34.45	1188	27.51	65.2	12.65	60.24	1480.
1500	2.27	34.53	1484	27.60	57.7	14.49	85.48	1483.



PACIFIC OCEANOGRAPHIC GROUP

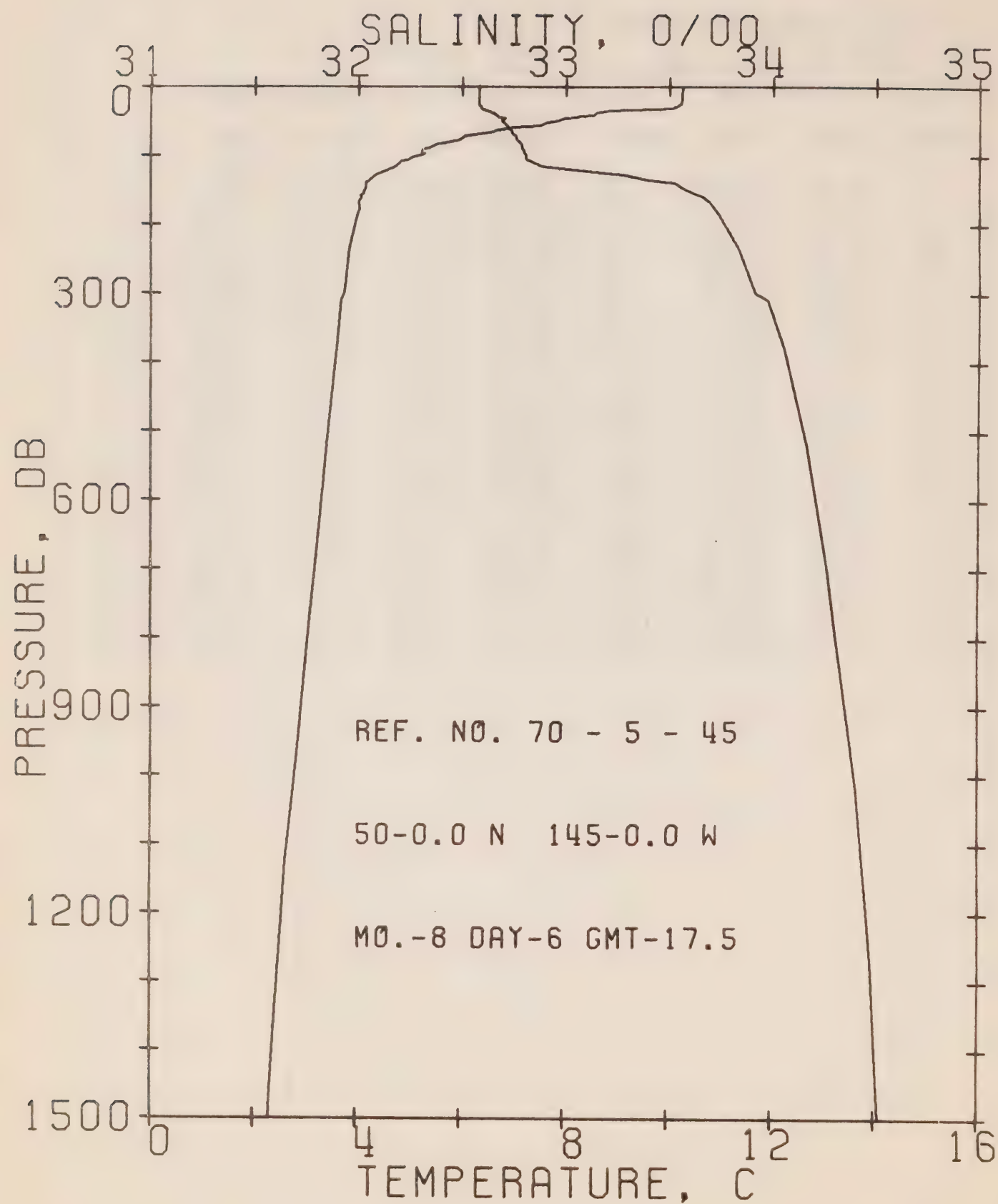
REFERENCE NO. 70- 5- 44

DATE 6/ 8/70

POSITION 50- 0.0N, 145- 0.0W GMT 0.2

RESULTS OF STP CAST 43 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	10.20	32.57	0	25.05	292.3	0.0	0.0	1488.
10	10.17	32.57	10	25.05	292.1	0.29	0.01	1488.
20	10.12	32.57	20	25.06	291.5	0.58	0.06	1488.
30	8.29	32.60	30	25.38	261.6	0.87	0.13	1481.
50	7.24	32.71	50	25.61	239.7	1.37	0.34	1478.
75	5.57	32.78	75	25.88	214.4	1.93	0.69	1472.
100	5.07	32.83	99	25.97	205.3	2.46	1.16	1470.
125	4.48	33.15	124	26.29	175.0	2.94	1.71	1468.
150	4.17	33.61	149	26.69	137.7	3.33	2.25	1468.
175	4.05	33.71	174	26.78	129.5	3.66	2.80	1468.
200	4.02	33.77	199	26.83	124.4	3.98	3.41	1469.
225	3.87	33.80	223	26.87	120.7	4.28	4.07	1468.
250	3.87	33.87	248	26.92	116.3	4.58	4.79	1469.
300	3.73	33.94	298	27.00	109.4	5.14	6.36	1469.
400	3.61	34.04	397	27.09	101.8	6.20	10.12	1470.
500	3.49	34.12	496	27.17	94.9	7.18	14.61	1472.
600	3.35	34.19	595	27.24	88.9	8.10	19.75	1473.
800	3.06	34.30	793	27.35	79.1	9.77	31.64	1475.
1000	2.81	34.39	990	27.44	71.5	11.27	45.36	1477.
1200	2.58	34.46	1188	27.51	65.0	12.64	60.58	1480.
1500	2.28	34.53	1484	27.60	57.8	14.48	85.77	1484.



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 5- 45

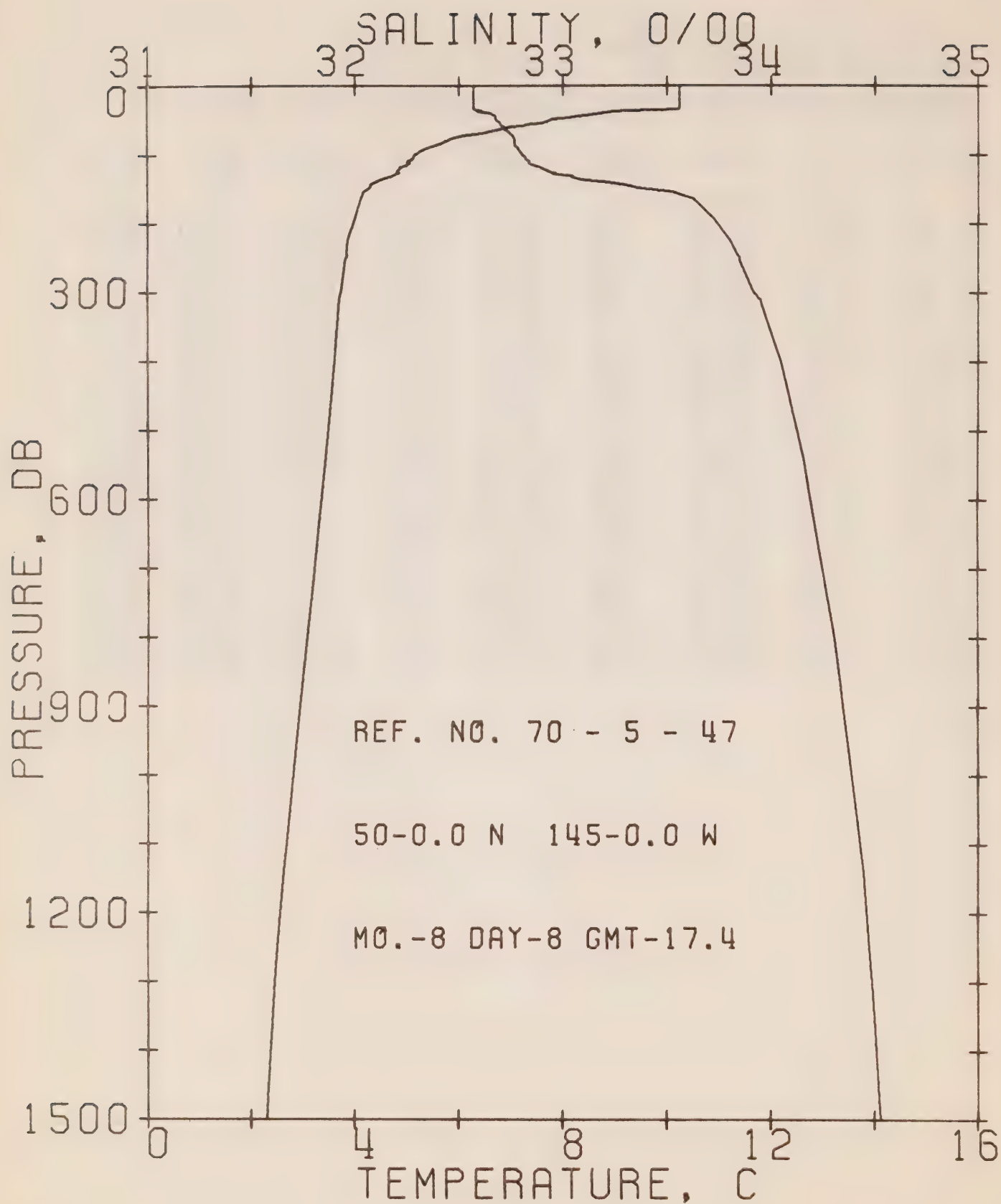
DATE 6/ 8/70

POSITION 50- 0.0N, 145- 0.0W GMT 17.5

RESULTS OF STP CAST 51 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	10.27	32.58	0	25.04	292.6	0.0	0.0	1488.
10	10.26	32.58	10	25.04	292.9	0.29	0.01	1488.
20	10.25	32.58	20	25.05	293.0	0.59	0.06	1489.
30	10.12	32.59	30	25.08	290.2	0.88	0.13	1488.
50	7.85	32.69	50	25.51	249.4	1.41	0.35	1480.
75	6.01	32.76	75	25.81	220.6	1.99	0.72	1473.
100	5.20	32.81	99	25.94	208.2	2.52	1.19	1471.
125	4.46	33.18	124	26.31	173.1	3.01	1.75	1468.
150	4.15	33.58	149	26.67	139.3	3.39	2.28	1468.
175	4.03	33.72	174	26.79	128.5	3.72	2.83	1468.
200	3.96	33.77	199	26.84	123.9	4.04	3.43	1468.
225	3.88	33.82	223	26.88	119.7	4.34	4.09	1468.
250	3.82	33.86	248	26.92	116.4	4.64	4.80	1469.
300	3.74	33.92	298	26.98	111.3	5.21	6.40	1469.
400	3.57	34.08	397	27.12	98.7	6.24	10.06	1470.
500	3.44	34.15	496	27.19	92.2	7.19	14.42	1472.
600	3.30	34.21	595	27.26	87.0	8.09	19.42	1473.
800	3.04	34.31	793	27.36	78.2	9.73	31.14	1475.
1000	2.79	34.40	990	27.45	70.3	11.22	44.68	1477.
1200	2.54	34.46	1188	27.52	64.3	12.56	59.69	1480.
1500	2.27	34.52	1484	27.59	58.4	14.40	84.87	1483.





PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 5- 47

DATE 8/ 8/70

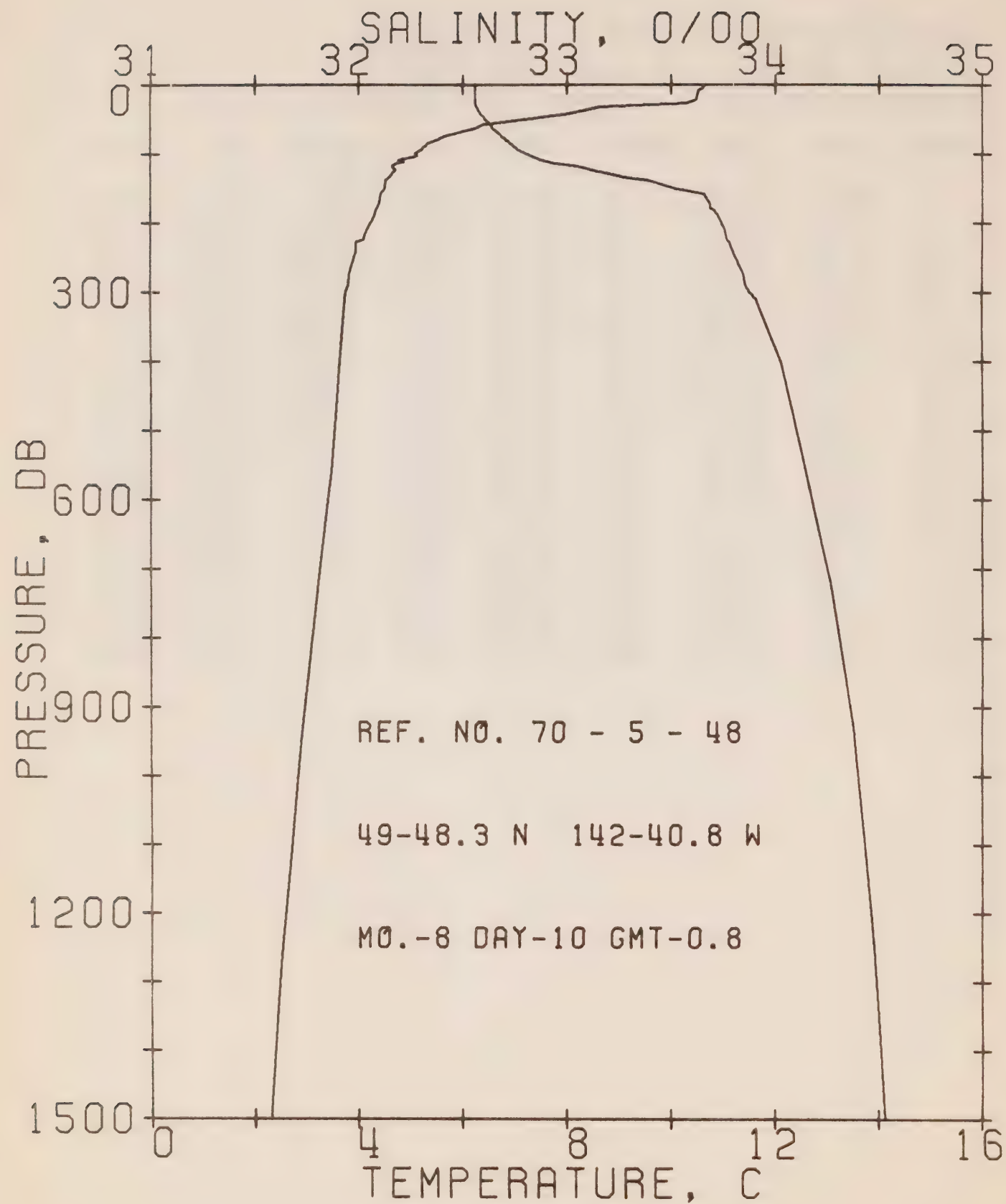
POSITION 50- 0.0N, 145- 0.0W

GMT 17.4

RESULTS OF STD CAST

53 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	10.28	32.57	0	25.03	293.5	0.0	0.0	1488.
10	10.26	32.57	10	25.04	293.6	0.29	0.01	1488.
20	10.25	32.57	20	25.04	293.7	0.59	0.06	1489.
30	10.25	32.57	30	25.04	293.9	0.88	0.13	1489.
50	7.76	32.69	50	25.52	248.4	1.42	0.35	1480.
75	5.95	32.77	75	25.82	219.7	2.00	0.72	1473.
100	5.17	32.81	99	25.95	207.8	2.54	1.20	1470.
125	4.83	32.94	124	26.09	194.4	3.04	1.78	1470.
150	4.27	33.42	149	26.53	153.2	3.48	2.39	1468.
175	4.10	33.67	174	26.74	132.9	3.83	2.96	1468.
200	3.99	33.74	199	26.81	126.2	4.15	3.58	1468.
225	3.87	33.81	223	26.88	120.5	4.46	4.25	1468.
250	3.85	33.85	248	26.91	117.3	4.76	4.97	1469.
300	3.75	33.92	298	26.98	111.4	5.33	6.57	1469.
400	3.61	34.05	397	27.09	101.1	6.38	10.31	1470.
500	3.49	34.13	496	27.17	94.7	7.36	14.78	1472.
600	3.36	34.19	595	27.23	89.0	8.28	19.92	1473.
800	3.08	34.31	793	27.35	78.9	9.96	31.80	1475.
1000	2.82	34.39	990	27.44	71.2	11.46	45.50	1477.
1200	2.56	34.46	1188	27.52	64.2	12.81	60.58	1480.
1500	2.28	34.53	1484	27.60	57.8	14.64	85.61	1484.



PACIFIC OCEANOGRAPHIC GROUP

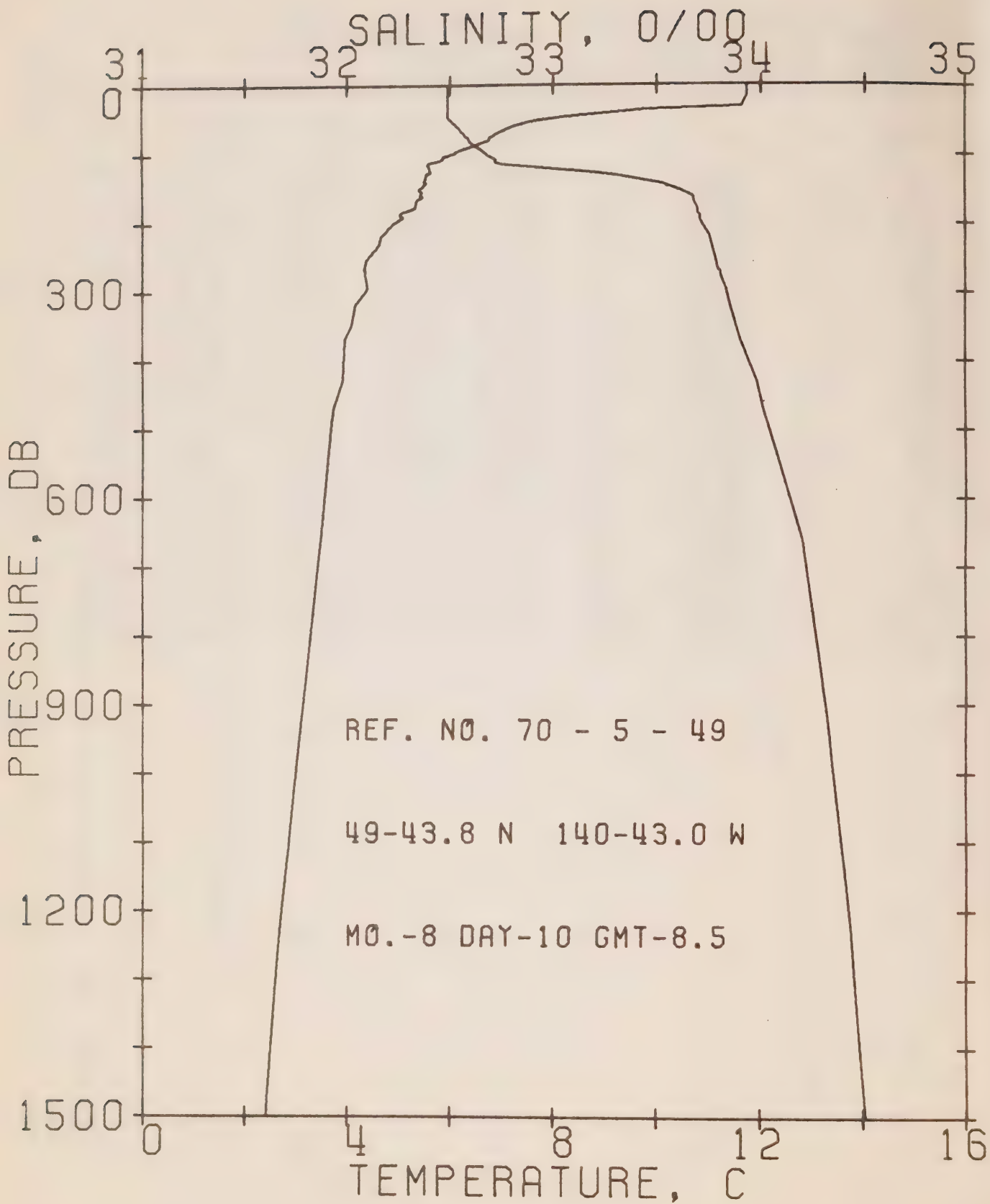
REFERENCE NO. 70- 5- 48

DATE 10/ 8/70

POSITION 49-49.3N. 142-40.8W GMT 0.8

RESULTS OF STP CAST 48 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	10.68	32.56	0	24.96	300.8	0.0	0.0	1490.
10	10.53	32.56	10	24.98	298.8	0.30	0.02	1489.
20	10.51	32.56	20	24.99	298.5	0.60	0.06	1489.
30	9.31	32.57	30	25.19	279.5	0.89	0.14	1485.
50	7.22	32.61	50	25.54	246.5	1.41	0.35	1478.
75	5.64	32.69	75	25.80	221.5	2.00	0.72	1472.
100	5.10	32.81	99	25.95	207.1	2.53	1.19	1470.
125	4.71	33.14	124	26.26	177.9	3.01	1.75	1469.
150	4.52	33.52	149	26.58	148.1	3.42	2.31	1469.
175	4.39	33.69	174	26.73	134.2	3.76	2.88	1470.
200	4.24	33.74	199	26.79	128.8	4.09	3.51	1469.
225	4.06	33.77	223	26.83	124.9	4.41	4.19	1469.
250	3.93	33.81	248	26.87	120.9	4.71	4.93	1469.
300	3.76	33.88	298	26.94	114.5	5.30	6.58	1469.
400	3.64	34.03	397	27.08	102.8	6.38	10.41	1471.
500	3.54	34.10	496	27.15	97.0	7.38	14.98	1472.
600	3.42	34.18	595	27.22	90.8	8.32	20.24	1473.
800	3.11	34.31	793	27.35	79.1	10.01	32.24	1475.
1000	2.83	34.40	990	27.45	70.8	11.50	45.86	1477.
1200	2.59	34.46	1188	27.52	64.6	12.86	60.98	1480.
1500	2.28	34.53	1484	27.60	57.8	14.69	86.06	1484.





PACIFIC OCEANOGRAPHIC GROUP

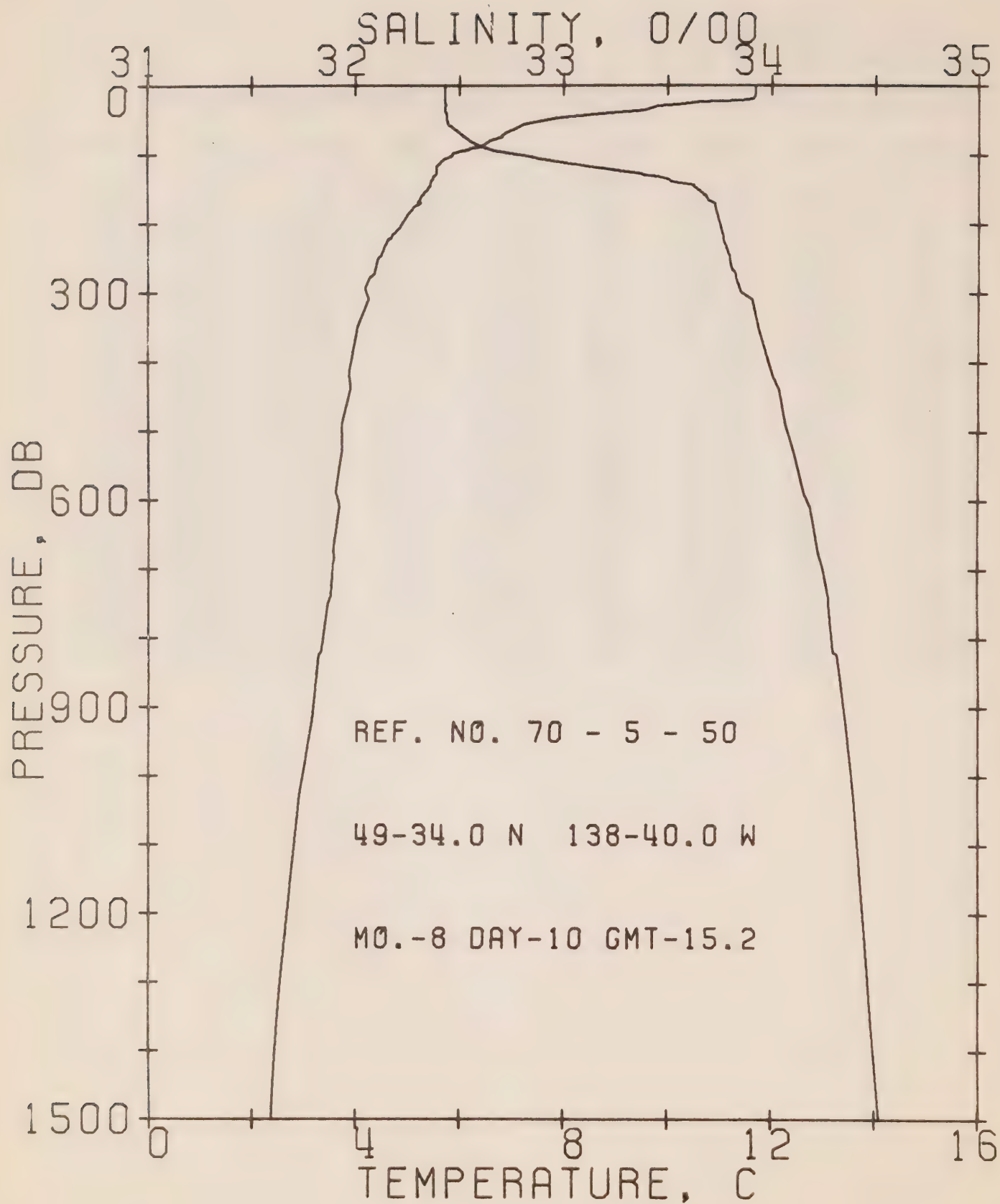
REFERENCE NO. 70- 5- 49

DATE 10/ 8/70

POSITION 49-43.8N, 140-43.0W GMT 8.5

RESULTS OF STP CAST 54 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	11.75	32.49	0	24.71	324.1	0.0	0.0	1493.
10	11.74	32.49	10	24.71	324.5	0.32	0.02	1494.
20	11.73	32.49	20	24.72	324.4	0.65	0.07	1494.
30	11.66	32.49	30	24.73	323.4	0.97	0.15	1494.
50	7.87	32.50	50	25.36	263.5	1.55	0.38	1480.
75	6.82	32.58	75	25.57	243.9	2.18	0.78	1476.
100	6.04	32.68	99	25.74	227.6	2.77	1.31	1474.
125	5.63	33.13	124	26.14	189.7	3.31	1.92	1473.
150	5.45	33.59	149	26.53	153.0	3.73	2.50	1473.
175	5.36	33.69	174	26.62	144.5	4.09	3.12	1474.
200	4.94	33.72	199	26.69	138.1	4.45	3.79	1472.
225	4.66	33.76	223	26.76	132.0	4.78	4.52	1472.
250	4.44	33.79	248	26.80	128.1	5.11	5.31	1471.
300	4.38	33.84	298	26.85	123.7	5.74	7.07	1472.
400	3.95	33.95	397	26.98	112.0	6.91	11.25	1472.
500	3.70	34.05	496	27.09	102.7	7.98	16.16	1472.
600	3.58	34.15	595	27.18	94.7	8.97	21.67	1474.
800	3.30	34.27	793	27.30	83.9	10.74	34.25	1476.
1000	3.01	34.36	990	27.40	75.8	12.34	48.83	1478.
1200	2.73	34.43	1188	27.48	68.4	13.78	64.92	1480.
1500	2.39	34.51	1484	27.57	60.5	15.71	91.34	1484.



-III-

PACIFIC OCEANOGRAPHIC GROUP

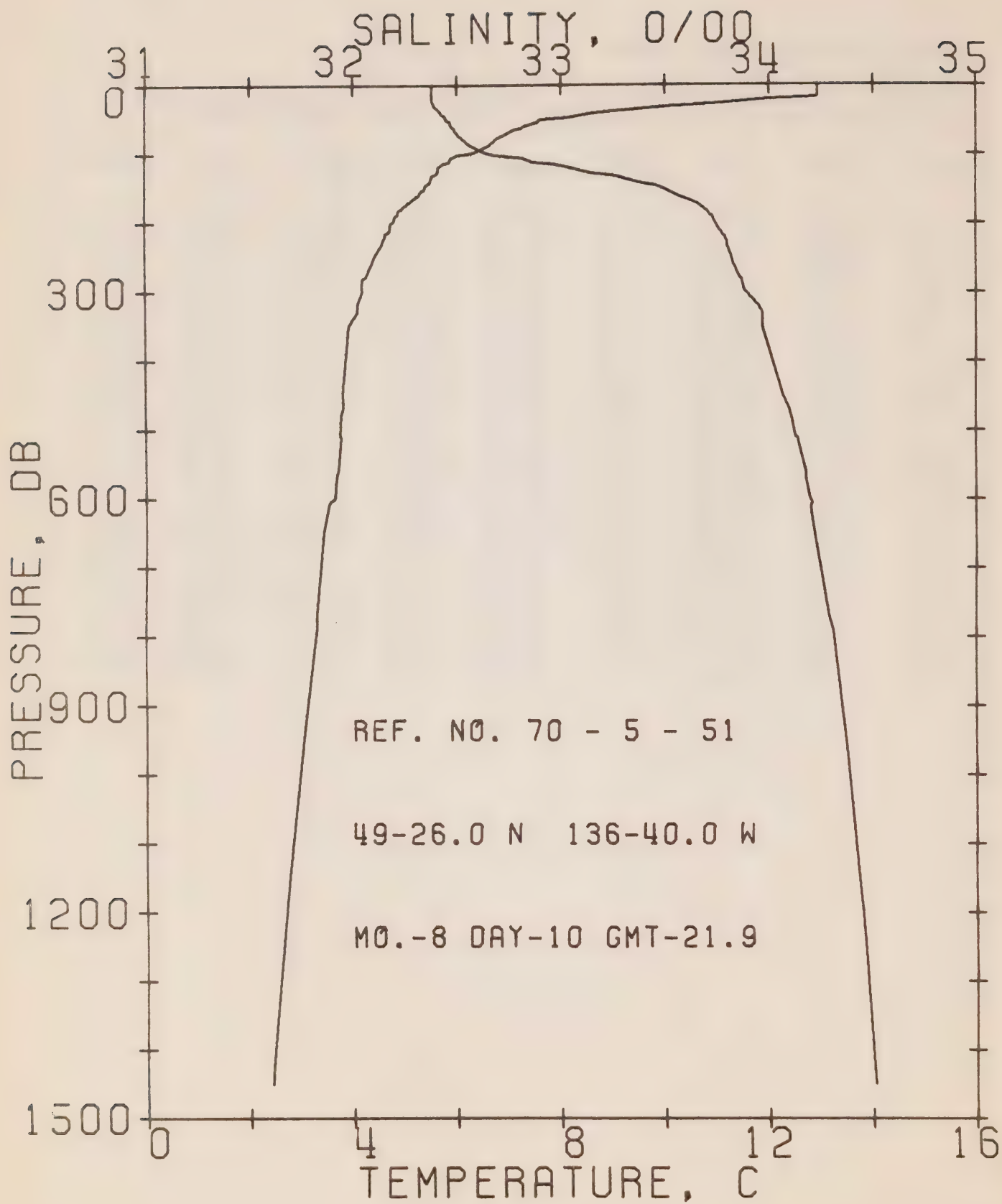
REFERENCE NO. 70- 5- 50

DATE 10/ 8/70

POSITION 49-34.0N, 138-40.0W GMT 15.2

RESULTS OF STP CAST 67 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	11.69	32.43	0	24.68	327.5	0.0	0.0	1493.
10	11.69	32.43	10	24.68	327.9	0.33	0.02	1493.
20	11.65	32.43	20	24.68	327.5	0.66	0.07	1493.
30	9.83	32.43	30	25.00	297.5	0.97	0.15	1487.
50	7.69	32.44	50	25.34	265.6	1.53	0.38	1479.
75	6.81	32.53	75	25.53	247.5	2.17	0.78	1476.
100	5.89	32.79	99	25.85	217.5	2.76	1.30	1473.
125	5.57	33.31	124	26.29	175.3	3.25	1.87	1473.
150	5.41	33.65	149	26.58	148.4	3.65	2.42	1473.
175	5.16	33.73	174	26.68	139.4	4.01	3.02	1473.
200	4.92	33.75	199	26.72	135.3	4.35	3.67	1472.
225	4.64	33.77	223	26.77	131.0	4.69	4.39	1472.
250	4.45	33.80	248	26.81	127.3	5.01	5.17	1471.
300	4.20	33.86	298	26.88	120.5	5.63	6.91	1471.
400	3.93	33.99	397	27.02	108.8	6.76	10.95	1472.
500	3.75	34.08	496	27.10	101.0	7.81	15.75	1473.
600	3.65	34.17	595	27.19	93.7	8.78	21.19	1474.
800	3.39	34.29	793	27.31	83.4	10.55	33.72	1476.
1000	2.99	34.39	990	27.42	73.3	12.10	47.95	1478.
1200	2.68	34.44	1188	27.49	67.2	13.50	63.63	1480.
1500	2.33	34.52	1484	27.59	59.1	15.39	89.57	1484.



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 5- 51

DATE 10/ 8/70

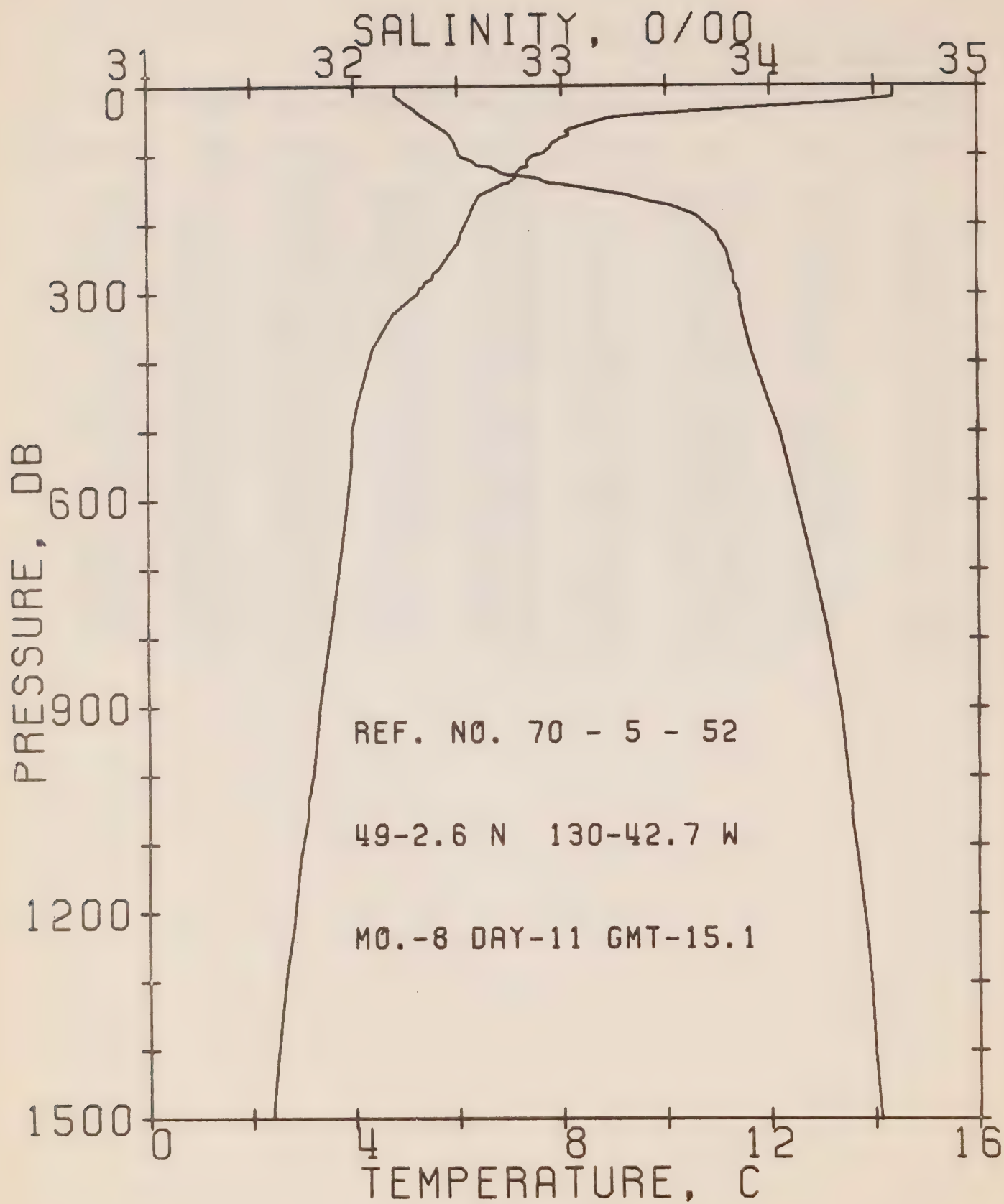
POSITION 49-26.0N, 136-40.0W GMT 21.9

RESULTS OF STP CAST 70 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	12.95	32.38	0	24.40	353.9	0.0	0.0	1497.
10	12.95	32.38	10	24.40	354.4	0.35	0.02	1498.
20	12.32	32.38	20	24.52	343.0	0.71	0.07	1496.
30	10.45	32.39	30	24.87	310.0	1.03	0.15	1489.
50	7.65	32.45	50	25.35	264.5	1.60	0.38	1479.
75	6.85	32.52	75	25.51	249.2	2.24	0.79	1476.
100	6.23	32.66	99	25.70	231.3	2.85	1.33	1475.
125	5.65	33.11	124	26.13	190.9	3.37	1.93	1473.
150	5.41	33.49	149	26.46	159.9	3.80	2.53	1473.
175	5.03	33.67	174	26.64	142.5	4.18	3.16	1472.
200	4.78	33.75	199	26.73	134.3	4.53	3.82	1472.
225	4.61	33.80	223	26.79	129.0	4.86	4.53	1471.
250	4.43	33.82	248	26.83	125.3	5.17	5.30	1471.
300	4.19	33.89	298	26.91	118.2	5.78	7.00	1471.
400	3.86	34.02	397	27.05	105.9	6.89	10.93	1471.
500	3.76	34.12	496	27.14	97.9	7.90	15.59	1473.
600	3.65	34.20	595	27.21	91.8	8.85	20.88	1474.
800	3.27	34.31	793	27.34	80.7	10.57	33.08	1476.
1000	2.96	34.39	990	27.42	73.3	12.10	47.14	1478.
1200	2.70	34.45	1188	27.50	66.9	13.50	62.79	1480.



-III-



PACIFIC OCEANOGRAPHIC GROUP

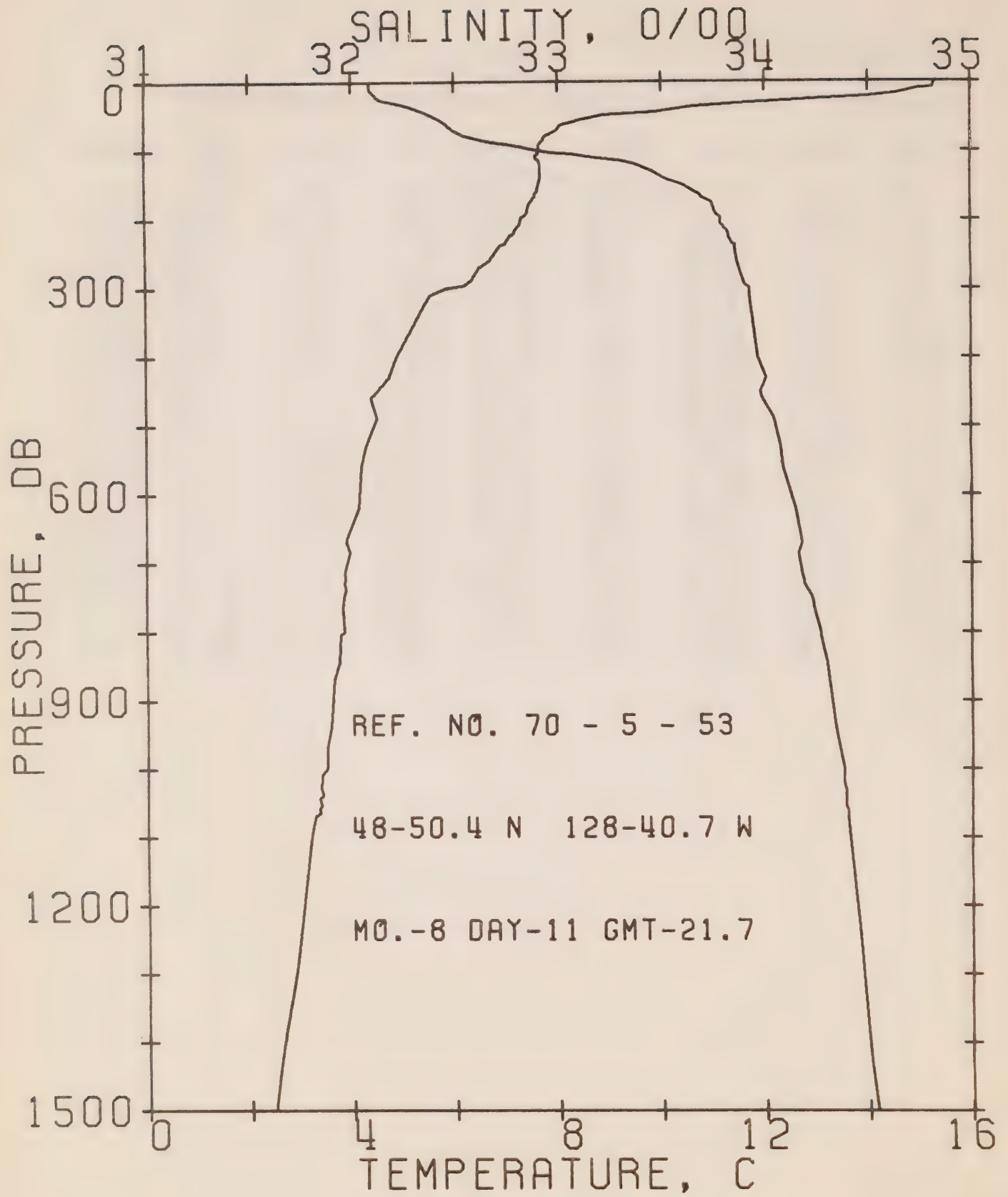
REFERENCE NO. 70- 5- 52

DATE 11/ 8/70

POSITION 49- 2.6N, 130-42.7W GMT 15.1

RESULTS OF STP CAST 62 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	14.40	32.20	0	23.97	395.1	0.0	0.0	1502.
10	14.40	32.20	10	23.97	395.6	0.40	0.02	1502.
20	13.96	32.23	20	24.08	384.7	0.79	0.08	1501.
30	12.10	32.28	30	24.48	346.7	1.16	0.17	1495.
50	8.75	32.37	50	25.12	285.9	1.78	0.42	1493.
75	8.03	32.48	75	25.31	268.1	2.47	0.86	1481.
100	7.52	32.52	99	25.42	258.6	3.12	1.45	1479.
125	7.18	32.71	124	25.62	239.8	3.75	2.16	1479.
150	6.68	33.15	149	26.03	201.0	4.30	2.94	1478.
175	6.33	33.54	174	26.38	167.8	4.76	3.69	1477.
200	6.19	33.70	199	26.52	154.8	5.16	4.46	1477.
225	6.05	33.77	224	26.60	148.0	5.54	5.27	1477.
250	5.81	33.81	248	26.66	142.3	5.90	6.15	1477.
300	5.27	33.86	298	26.77	132.5	6.59	8.08	1475.
400	4.30	33.93	397	26.93	117.1	7.83	12.48	1473.
500	3.98	34.05	496	27.06	105.7	8.94	17.58	1474.
600	3.88	34.13	595	27.13	99.4	9.97	23.33	1475.
800	3.53	34.28	793	27.29	85.9	11.82	36.44	1477.
1000	3.19	34.37	991	27.39	76.7	13.43	51.20	1479.
1200	2.84	34.45	1188	27.49	68.2	14.88	67.42	1481.
1500	2.38	34.53	1484	27.59	58.9	16.78	93.49	1484.



PACIFIC OCEANOGRAPHIC GROUP

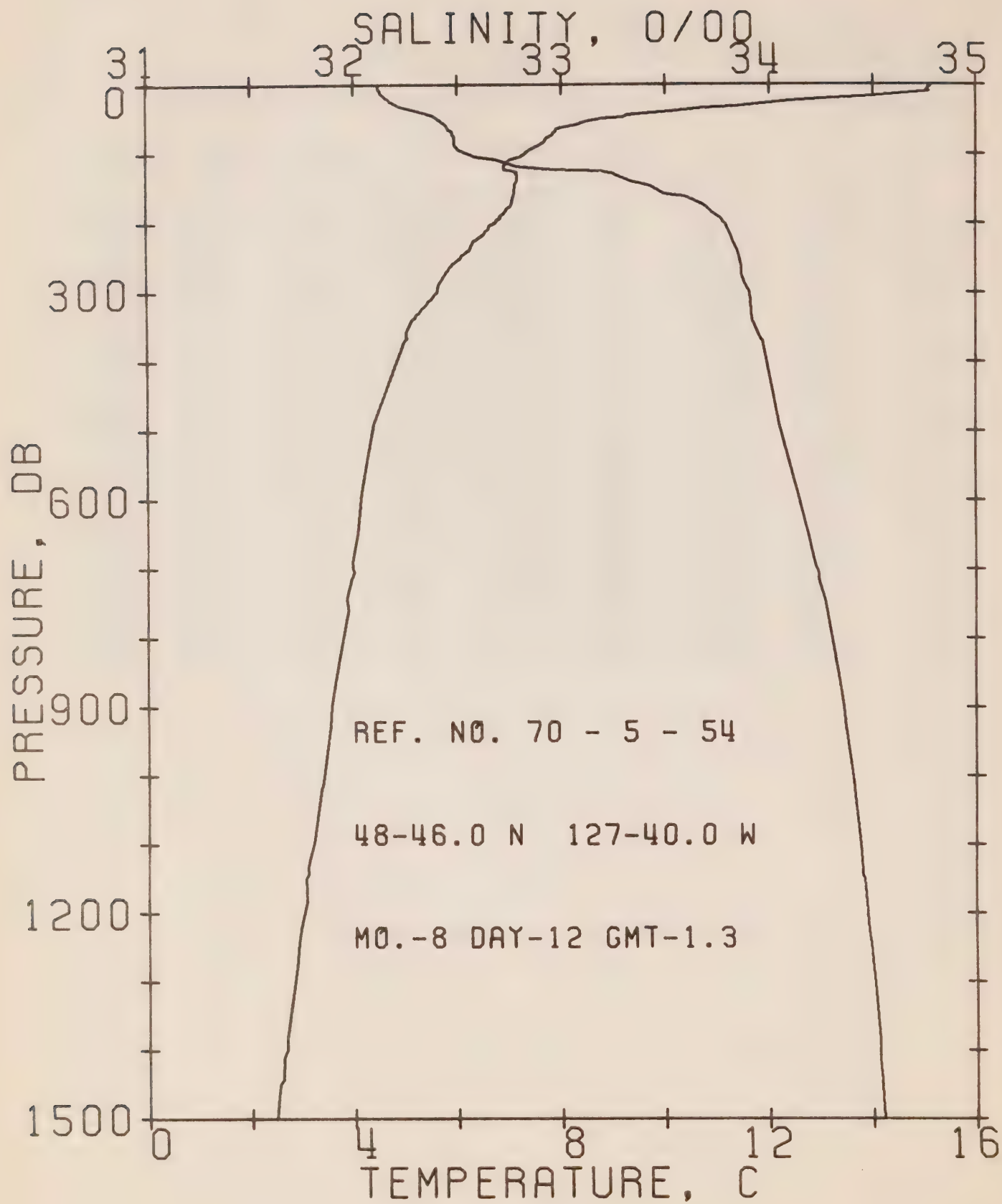
REFERENCE NO. 70- 5- 53

DATE 11/ 8/70

POSITION 48-50.4N, 128-40.7W GMT 21.7

RESULTS OF STP CAST 84 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	15.32	32.09	0	23.69	421.8	0.0	0.0	1505.
10	15.01	32.09	10	23.75	416.0	0.42	0.02	1504.
20	14.27	32.12	20	23.94	398.8	0.83	0.08	1502.
30	11.97	32.21	30	24.45	349.6	1.21	0.18	1494.
50	8.78	32.40	50	25.15	283.9	1.83	0.43	1483.
75	7.88	32.53	75	25.38	261.9	2.51	0.86	1480.
100	7.64	32.91	99	25.71	230.5	3.13	1.41	1480.
125	7.69	33.42	124	26.10	194.1	3.65	2.01	1482.
150	7.67	33.61	149	26.25	180.0	4.12	2.66	1482.
175	7.50	33.74	174	26.38	168.1	4.55	3.39	1482.
200	7.31	33.79	199	26.45	162.5	4.97	4.18	1482.
225	7.09	33.83	224	26.51	156.7	5.37	5.04	1482.
250	6.80	33.86	248	26.58	150.8	5.75	5.97	1481.
300	5.85	33.93	298	26.75	134.3	6.48	8.00	1478.
400	4.90	33.97	397	26.90	121.1	7.74	12.49	1476.
500	4.45	34.06	496	27.01	110.4	8.90	17.78	1476.
600	4.17	34.13	595	27.10	102.7	9.96	23.73	1476.
800	3.85	34.27	793	27.25	90.3	11.89	37.45	1478.
1000	3.50	34.38	991	27.37	79.8	13.58	52.98	1480.
1200	3.05	34.44	1188	27.46	71.3	15.09	69.81	1482.
1500	2.45	34.54	1484	27.59	59.0	17.06	96.76	1484.





PACIFIC OCEANOGRAPHIC GROUP

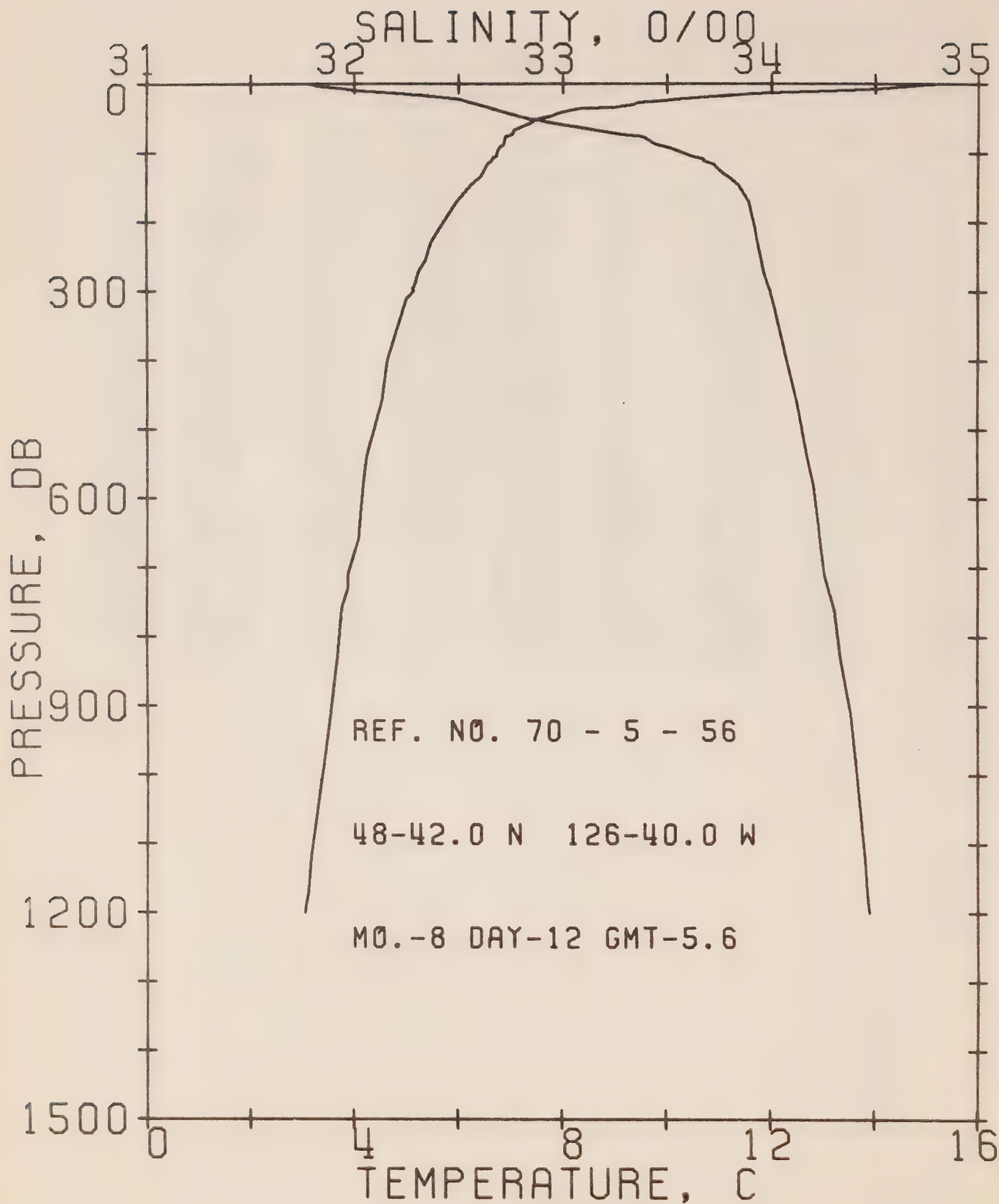
REFERENCE NO. 70- 5- 54

DATE 12/ 8/70

POSITION 48-46.0N, 127-40.0W GMT 1.3

RESULTS OF STP CAST 91 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	15.16	32.12	0	23.74	416.4	0.0	0.0	1504.
10	15.10	32.13	10	23.76	414.9	0.42	0.02	1504.
20	13.25	32.16	20	24.17	376.1	0.81	0.08	1499.
30	11.61	32.22	30	24.53	342.8	1.17	0.17	1493.
50	8.73	32.41	50	25.16	282.4	1.79	0.42	1483.
75	7.79	32.49	75	25.36	263.9	2.46	0.85	1480.
100	7.32	32.56	99	25.48	252.7	3.11	1.43	1479.
125	7.10	33.20	124	26.01	202.4	3.70	2.10	1479.
150	7.13	33.45	149	26.21	184.3	4.18	2.78	1480.
175	7.05	33.69	174	26.41	165.7	4.62	3.50	1480.
200	6.74	33.79	199	26.53	154.7	5.02	4.27	1480.
225	6.37	33.83	224	26.61	147.4	5.40	5.08	1479.
250	6.10	33.86	248	26.66	142.0	5.76	5.96	1478.
300	5.62	33.91	298	26.76	133.0	6.45	7.88	1477.
400	4.85	33.99	397	26.92	119.0	7.70	12.34	1476.
500	4.38	34.06	496	27.02	109.4	8.84	17.56	1475.
600	4.15	34.15	595	27.12	101.1	9.89	23.44	1476.
800	3.80	34.30	793	27.28	87.3	11.77	36.80	1478.
1000	3.41	34.40	991	27.39	77.1	13.41	51.75	1480.
1200	3.02	34.47	1188	27.49	68.8	14.86	68.00	1482.
1500	2.45	34.55	1484	27.60	58.3	16.75	93.97	1484.



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO: 70- 5- 56

DATE 12/ 8/70

POSITION 48-42.0N, 126-40.0W GMT 5.6

RESULTS OF STP CAST 59 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	15.27	31.79	0	23.47	442.8	0.0	0.0	1504.
10	13.10	32.03	10	24.10	382.9	0.42	0.02	1498.
20	10.55	32.44	20	24.89	307.8	0.76	0.07	1489.
30	9.37	32.60	30	25.21	277.8	1.05	0.15	1485.
50	7.56	32.84	50	25.66	234.4	1.55	0.35	1479.
75	6.97	33.36	75	26.15	188.3	2.08	0.69	1478.
100	6.77	33.59	99	26.36	169.0	2.53	1.08	1478.
125	6.52	33.76	124	26.53	153.2	2.93	1.54	1478.
150	6.22	33.86	149	26.65	142.4	3.30	2.06	1477.
175	5.96	33.90	174	26.72	136.0	3.64	2.63	1476.
200	5.74	33.92	199	26.76	132.3	3.98	3.27	1476.
225	5.52	33.94	223	26.80	128.9	4.31	3.98	1475.
250	5.41	33.96	248	26.82	126.5	4.62	4.75	1475.
300	5.16	34.00	298	26.89	120.8	5.24	6.48	1475.
400	4.65	34.08	397	27.01	110.0	6.39	10.56	1475.
500	4.40	34.15	496	27.10	102.6	7.45	15.43	1476.
600	4.16	34.22	595	27.17	96.1	8.44	20.97	1476.
800	3.72	34.33	793	27.30	84.7	10.26	33.90	1478.
1000	3.39	34.42	990	27.41	75.6	11.86	48.53	1480.
1200	3.04	34.48	1188	27.49	68.5	13.30	64.63	1482.

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 5- 57

DATE 12/ 8/70

POSITION 48-38.0N, 126- 0.0W GMT 8.0

RESULTS OF STP CAST 29 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	14.73	31.85	0	23.63	427.4	0.0	0.0	1503.
10	14.52	31.85	10	23.67	423.7	0.43	0.02	1502.
20	12.82	31.93	20	24.08	385.3	0.84	0.08	1497.
30	10.50	32.22	30	24.72	323.7	1.19	0.17	1489.
50	8.28	32.39	50	25.21	277.4	1.79	0.41	1481.
75	7.77	32.55	75	25.41	259.1	2.46	0.84	1480.
100	7.27	32.98	99	25.82	220.7	3.06	1.38	1479.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	14.73	31.85	40.	9.29	32.32
3.	14.77	31.85	44.	8.66	32.35
5.	14.74	31.85	48.	8.33	32.38
6.	14.76	31.85	52.	8.23	32.41
8.	14.55	31.85	63.	8.13	32.48
9.	14.60	31.85	67.	7.96	32.50
12.	14.36	31.85	70.	7.95	32.51
16.	13.95	31.87	72.	7.80	32.52
18.	13.81	31.89	74.	7.76	32.54
20.	12.82	31.93	76.	7.78	32.56
24.	11.38	32.07	80.	7.62	32.60
28.	10.95	32.17	84.	7.53	32.69
30.	10.50	32.22	90.	7.49	32.75
34.	10.41	32.27	100.	7.27	32.98
39.	9.28	32.31			

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 5- 58

DATE 12/ 8/70

POSITION 48-34.0N, 125-31.0W GMT 9.7

RESULTS OF STP CAST 25 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	13.54	31.49	0	23.60	430.5	0.0	0.0	1498.
10	9.85	31.95	10	24.62	333.1	0.37	0.02	1486.
20	9.17	32.14	20	24.88	309.0	0.69	0.07	1484.
30	8.66	32.42	30	25.17	280.8	0.99	0.14	1483.
50	8.15	32.69	50	25.46	253.5	1.52	0.36	1481.
75	7.71	32.96	75	25.74	227.4	2.12	0.74	1480.
100	6.74	33.57	99	26.35	169.8	2.61	1.17	1478.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	13.54	31.49	44.	8.42	32.57
8.	9.90	31.93	50.	8.15	32.69
10.	9.85	31.95	53.	8.05	32.80
13.	9.50	32.00	66.	7.93	32.87
14.	9.50	32.02	70.	7.76	32.94
16.	9.35	32.06	76.	7.70	32.97
18.	9.25	32.11	78.	7.68	33.00
23.	9.06	32.18	83.	7.50	33.09
26.	8.75	32.33	84.	7.29	33.11
32.	8.61	32.46	87.	7.22	33.27
35.	8.56	32.47	96.	6.75	33.55
36.	8.45	32.51	100.	6.74	33.57
40.	8.43	32.57			





SURFACE TEMPERATURE AND SALINITY OBSERVATIONS

SURFACE SALINITY AND TEMPERATURE OBSERVATIONS  
CRUISE REFERENCE NUMBER 70- 5

DATE/TIME				SALINITY	TEMP	LONGITUDE
YR	MO	DY	GMT	O/00	C	WEST
70	6	27	930	31.997	0.0	125-32
70	6	27	1045	32.303	0.0	126- 0
70	6	27	1230	32.238	0.0	126-40
70	6	27	1530	32.037	0.0	127-40
70	6	27	1915	31.735	0.0	128-40
70	6	27	2305	31.961	0.0	129-40
70	6	28	900	32.482	0.0	131-40
70	6	28	1220	32.430	0.0	132-40
70	6	28	1500	32.305	0.0	133-40
70	6	28	2215	32.459	0.0	136-40
70	6	29	100	32.406	0.0	137-40
70	6	29	350	32.521	0.0	138-40
70	6	29	900	32.567	0.0	140-40
70	6	29	1200	32.610	0.0	141-40
70	6	30	0	32.638	0.0	144-30
70	7	1	0	32.649	0.0	145- 0
70	7	2	0	32.697	0.0	144-56
70	7	3	0	32.663	0.0	144-57
70	7	4	0	32.764	0.0	145- 2
70	7	5	0	32.662	0.0	144-56
70	7	6	0	32.650	0.0	144-55
70	7	7	0	32.712	0.0	145-32
70	7	8	0	32.698	0.0	145-29
70	7	9	0	32.674	0.0	145- 1
70	7	10	0	32.667	0.0	144-54
70	7	11	0	32.664	0.0	145- 1
70	7	12	0	32.662	0.0	144-58
70	7	13	0	32.665	0.0	145- 5
70	7	14	0	32.640	0.0	144-56
70	7	15	0	32.638	0.0	145- 1
70	7	16	0	32.645	0.0	145- 0
70	7	17	0	32.632	0.0	145- 1
70	7	18	0	0.000	0.0	145- 4
70	7	19	0	32.693	0.0	144-55
70	7	20	0	32.723	0.0	144-59
70	7	21	0	32.660	0.0	145- 1
70	7	22	0	32.661	0.0	145- 2
70	7	23	0	32.634	0.0	144-58
70	7	24	0	32.632	0.0	145- 0
70	7	25	0	32.615	0.0	145- 2
70	7	26	0	32.556	0.0	144-59
70	7	27	0	32.611	0.0	145- 1
70	7	28	0	32.578	0.0	145- 0
70	7	29	0	32.603	0.0	145- 1
70	7	30	0	32.596	0.0	145- 2
70	7	31	0	32.591	0.0	145- 5
70	8	1	0	32.595	0.0	145- 2
70	8	2	0	32.590	0.0	145- 3
70	8	3	0	32.627	0.0	145- 0

SURFACE SALINITY AND TEMPERATURE OBSERVATIONS  
CRUISE REFERENCE NUMBER 70- 5

DATE/TIME				SALINITY	TEMP	LONGITUDE
YR	MO	DY	GMT	O/00	C	WEST
70	8	4	0	32.597	0.0	144-45
70	8	5	0	32.588	0.0	145-16
70	8	6	0	32.618	0.0	144-57
70	8	7	0	32.613	0.0	145- 5
70	8	8	0	32.611	0.0	144-58
70	8	9	0	32.612	0.0	144-53
70	8	10	100	32.593	0.0	142-40
70	8	10	545	32.609	0.0	141-40
70	8	10	825	32.599	0.0	140-40
70	8	10	1200	32.557	0.0	139-40
70	8	10	1508	32.444	0.0	138-40
70	8	10	1850	32.391	0.0	137-40
70	8	10	2200	32.409	0.0	136-40
70	8	11	155	32.406	0.0	135-40
70	8	11	440	32.409	0.0	134-40
70	8	11	800	32.246	0.0	133-40
70	8	11	1900	32.212	0.0	129-40
70	8	11	2145	32.131	0.0	128-40
70	8	12	120	32.167	0.0	127-40
70	8	12	530	31.840	0.0	126-40
70	8	12	800	31.880	0.0	126- 0
70	8	12	1140	31.531	0.0	125-31







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-71R07

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PACIFIC MARINE SCIENCE REPORT 71-7

**OCEANOGRAPHIC OBSERVATIONS AT  
OCEAN STATION P (50° N, 145° W)  
VOLUME 48**

**J.H. Linggard, Master, CCGS VANCOUVER  
Marine Services Branch  
Ministry of Transport**

**and  
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Marine Sciences Branch  
Department of the Environment**



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MARINE SCIENCES BRANCH, PACIFIC REGION

PACIFIC MARINE SCIENCE REPORT NO. 71-7

OCEANOGRAPHIC OBSERVATIONS AT OCEAN STATION P (50°N, 145°W)

VOLUME 48

AUGUST 7 - NOVEMBER 4, 1970

by

J. H. Linggard, Master, CCGS VANCOUVER

Marine Services Branch

Ministry of Transport

and

C. de Jong, P. Vandergugten, C. Panchyson

Marine Sciences Branch

Department of the Environment





## INTRODUCTION

Canadian operation of Ocean Weather Station P (latitude  $50^{\circ}00'N$ , longitude  $145^{\circ}00'W$ ) was inaugurated in December, 1950. The station is manned by two vessels operated by the Marine Services Branch of the Department of Transport. They are the CCGS VANCOUVER and the CCGS QUADRA. Each ship remains on station for a period of six weeks, and is then relieved by the alternative ship, thus maintaining a continuous watch. The chief purpose of the station is to operate as a meteorological station for surface and upper-air observations and as an air-sea rescue station.

Bathythermograph observations have been made at Station P since July, 1952. A program of more extensive oceanographic observations was commenced in August, 1956. This was further extended in April, 1959, by the addition of a series of oceanographic stations along the route to and from Station P and Swiftsure Bank. These stations are known as Line P stations. The number of stations on Line P has been increased twice and now consists of twelve stations (Fig. 1). Bathythermograph observations and surface salinity sample collections in addition to being made on Line P oceanographic stations are also made at odd meridians at  $40'$  i.e.  $139^{\circ}40'W$ ,  $141^{\circ}40'W$ , etc. Data observed prior to 1968 has been indexed by Collins et al, (1969).

The present record includes salinity-temperature-pressure data collected from the VANCOUVER during the period August 7 to September 24, 1970, hydrographic data and salinity-temperature-pressure data collected from the QUADRA during the period September 18 to November 4, 1970. Mechanical and expendable bathythermograph traces obtained on these cruises are available on IBM microfiche cards and will be available in digitized format in the near future.

All physical data has been archived by the Canadian Oceanographic Data Centre (CODC), 615 Booth Street, Ottawa, Ontario, Canada. Requests for these data should be directed to CODC.

Biological and productivity data are published in the Manuscript Report series of the Fisheries Research Board of Canada (FRB), The Biological Station, Nanaimo, B.C., Canada. Requests for these data should be directed to F.R.B.

Bird observations are sent to Dr. M. Myres, University of Calgary, Calgary, Alberta, Canada; and Marine Mammal observations to Mr. I. McAskie, Fisheries Research Board of Canada, The Biological Station, Nanaimo, B.C., Canada.

Marine Geochemical data are for the Ocean Chemistry Group, Marine Sciences Branch, Department of the Environment, the Biological Station, Nanaimo, B.C., Canada.

Program of observations from CCGS VANCOUVER, August 7 to September 24, 1970  
(P-70-6) (CODC Ref. NO. 02-70-006)

Oceanographic observations were made by deck officers Messrs. Vermeersch and Hicking of the Marine Services Branch, Ministry of Transport.

En route to Station P mechanical BT observations were made and surface salinity samples taken on all Line P Hydrographic and BT stations.

At Station P profiles of salinity and temperature were obtained as follows:

- I) STD casts to 1500 meters were made weekly and to 300 meters twice a week.
- II) Mechanical BT casts were made eight times daily and a bucket salinity sample was taken at 0000 hrs GMT each day.

Other observations made and data obtained at Station P were as follows:

I) Biological and Nutrients.

A total of 40 vertical plankton hauls from 150 meters, 2 hauls from 1200 meters and 9 ten minutes horizontal plankton tows were made. Surface nitrate samples were collected on odd numbered days.

II) Marine Geochemical.

Duplicate air samples were collected weekly for CO<sub>2</sub> analysis.

III) Bird observations were made three times daily and a marine mammal log was kept.

En route from Station P no stations were occupied.

Program of observations from CCGS QUADRA, September 18 to November 4, 1970  
(P-70-7) (CODC Ref. NO. 02-70-007)

Oceanographic observations were made by Messrs. C. de Jong, P. Vandergugten and C. Panchyson of the Marine Sciences Branch, Department of the Environment.

En route to Station P, at Stations 1 to 10, temperature-salinity-pressure observations were made with a Bissett-Berman Model 9006-STD. Mechanical BT casts were made and surface salinity and nitrate samples were taken at all Line P hydrographic and BT stations.

On Station P profiles of salinity, temperature and oxygen were obtained as follows:

- I) Weekly Nansen bottle casts to near bottom (4200 meters).
- II) STD casts to 1500 meters immediately after each Nansen bottle cast.
- III) 300 meter STD casts twice weekly.
- IV) Mechanical BT casts were made 8 times daily and a bucket salinity sample was taken each day at 0000 hrs GMT.

Other observations made and data obtained at Station P as follows:

I) Biological

Weekly vertical plankton hauls from 150 meters and a total of 2 hauls from 1200 meters were made. Three ten minute horizontal plankton hauls were made between the second and fourth week of this patrol.

II) Productivity

- A) weekly surface measurements of photosynthesis and plant pigment.
- B) every second week a Van Doren bottle cast to 200 meters for pigment, photosynthesis measurement and nitrate analysis was made.

III) Marine Geophysics

- A) oxygen samples were taken once weekly from the hydrographic casts.
- B) nutrient samples were taken once weekly from the hydrographic casts, once daily from the seawater loop and at hourly intervals for one 24 hour period from the seawater loop.
- C) alkalinity samples were taken twice from the hydrographic casts and once every 3 days from the seawater loop.
- D)  $C^{14}O_2$  samples were taken twice from surface samples and once from the mixed layer.
- E) air samples for  $CO_2$  analysis were collected once a week.

IV) Marine mammal and bird observations were recorded.

En route from Station P only Station 12 was occupied with a Bissett-Berman STD. At all Line P hydrographic and BT stations an XBT cast was made and surface salinity, nitrate, alkalinity and nutrient samples were taken from the seawater loop.

Data was processed by Messrs. C. de Jong and D. Smith, and assembled and edited for publication by Mr. K. Abbott-Smith.



## Observational Procedures

Temperatures at depth were measured by deep-sea reversing thermometers of German (Richter and Wiese) or Japanese (Yoshina Keiki Co) manufacture. Two protected thermometers were used on all Nansen bottles, and one unprotected thermometer was used on each bottle at depths of 300 m or greater. The accuracy of protected reversing thermometers is believed to be  $\pm 0.02^\circ\text{C}$ .

Surface water temperatures were measured from a bucket sample using a deck thermometer of  $\pm 0.01^\circ\text{C}$  accuracy.

Salinity observations for cruise P-70-6 were made ashore with an Autolab Model 601 Mark III inductive salinometer and for cruise P-70-7 at sea and ashore with a Hytech model 6220 salinometer. Accuracy using duplicate determinations is estimated to be  $\pm 0.003$  ppt.

Depth determinations were made using the "depth difference" method described in the U.S.N. Hydrographic Office Publication No. 607 (1055). Depth estimates have an approximate accuracy of  $\pm 5$  m for depths less than 1000 m, and  $\pm 5\%$  of depth for depths greater than 1000 m.

The dissolved oxygen analyses were done in the shipboard laboratory by a modified Winkler method (Carpenter, 1965).

Salinity-temperature-pressure data were obtained with a Bissett-Berman Model 9040 STD on cruise P-70-6 and a Bissett-Berman Model 9006 STD on cruise P-70-7.

## Computations.

All hydrographic data were processed with the aid of an IBM 360 computer. Reversing thermometer temperature corrections, thermometric depth calculations, and accepted depth from the "depth difference" method were computed. Extraneous thermometric depths caused by thermometer malfunctions are automatically edited and replaced. A Calcomp 563 Offline Plotter was used to plot temperature-salinity and temperature-oxygen diagrams, as well as plots of temperature, salinity and dissolved oxygen vs  $\log_{10}$  depth. These plots were used to check the data for errors.

Missing hydrographic data were obtained using a weighted parabolas interpolation method (Reiniger and Ross, 1968). These data are indicated with an asterisk in this data record.

Analog records from the salinity-temperature-pressure instrument have been hand digitized, then replotted using the Calcomp Plotter. Digitization was continued until original and computer plotted traces were coincident. Temperature and salinity values were listed at standard pressures; integrals (depths, geopotential anomaly, and potential energy anomaly) were computed from the entire array of digitized data.



The headings for the data listings are explained as follows:

PRESS	is pressure (decibars)
TEMP	is temperature (decibars Celsius)
SAL	is salinity (parts per thousand)
DEPTH	is reported in meters
SIGMA-T	is specific gravity anomaly
SVA	is specific volume anomaly
THETA	is potential temperature (degrees Celsius)
SVA (THETA)	is potential specific volume anomaly
DELTA D	is geopotential anomaly (J/kg)
POT EN	is potential energy in units of $10^8$ ergs/cm <sup>2</sup>
OXY	is the concentration of dissolved oxygen expressed in milliliters per liter
V-B PERIOD	is the Väisälä-Brunt period in minutes

#### Summary of Hydrographic Data

The data are graphically summarized as follows: Composite plot of temperature vs.  $\log_{10}$  depth (Fig. 4), composite plot of salinity vs.  $\log_{10}$  depth (Fig. 5) and composite plot of dissolved oxygen vs.  $\log_{10}$  depth (Fig. 6) for hydrographic cast data from cruise P-70-7.

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## List of Figures

- Figure 1      Chart showing Line P station positions.
- Figure 2      Profiles of the salinity difference between bottle samples and a Bissett-Berman Model 9006 STD Ref. No. 70-07.
- Figure 3      Profiles of the temperature difference between Reversing Thermometers and a Bissett-Berman Model 9006 STD Ref. No. 70-07.
- Figure 4      Composite plot of temperature vs  $\log_{10}$  depth P-70-7.
- Figure 5      Composite plot of salinity vs  $\log_{10}$  depth P-70-7.
- Figure 6      Composite plot of oxygen vs  $\log_{10}$  depth P-70-7.
- Figure 7      T-S plot of surface temperature and salinity observations on Line P (asterisks) and at Station P (pluses) during Cruise P-70-6.
- Figure 8      T-S plot of surface temperature and salinity observations on Line P (asterisks) and at Station P (pluses) during Cruise P-70-7.

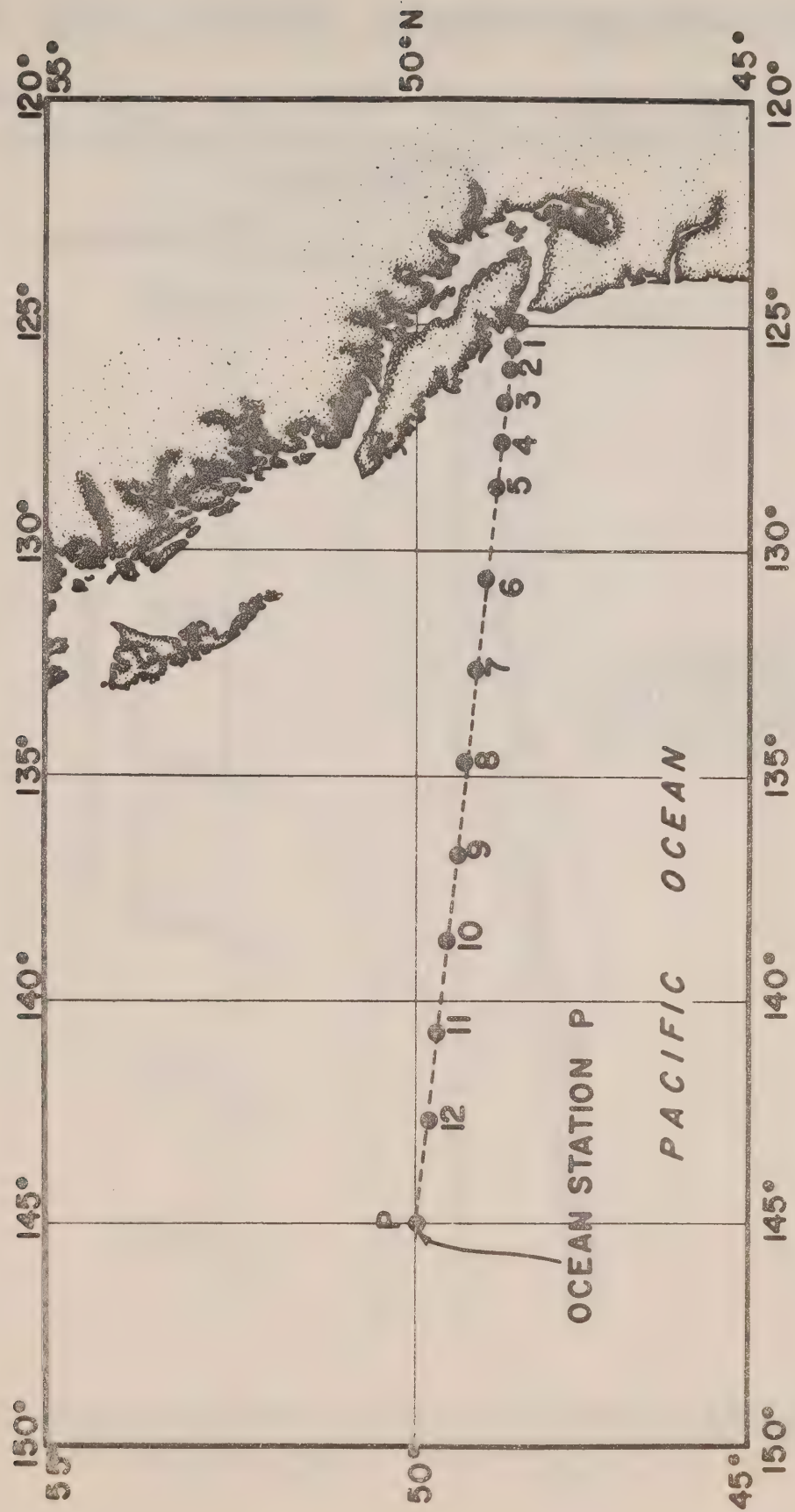


Fig. 1 Chart showing Line P station positions.

-f -

SALINITY DIFFERENCE , NANSEN - S.T.D., ‰

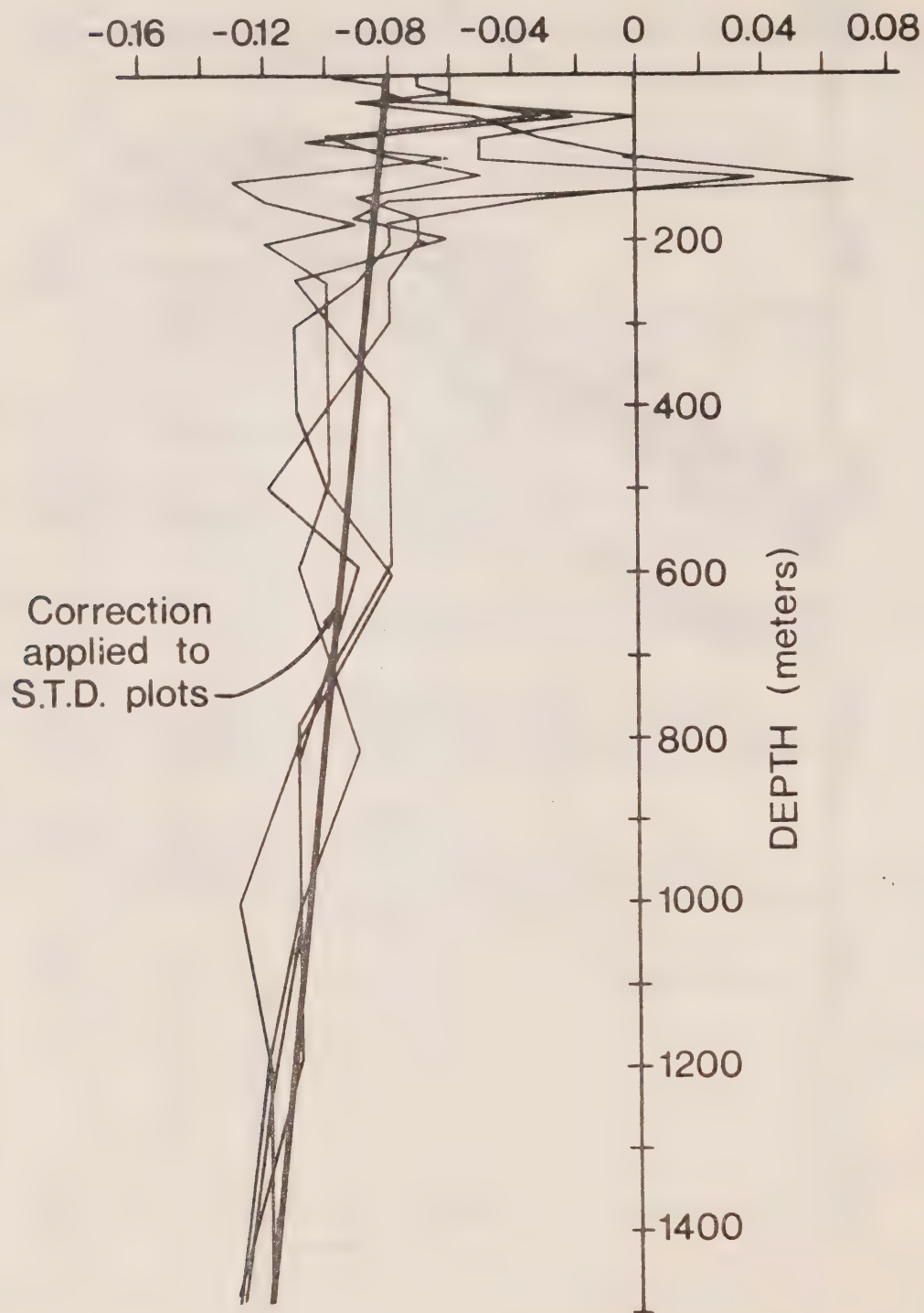


Figure 2 Profiles of the salinity difference between bottle samples and a Bissett-Berman Model 9006 STD Ref. No. 70-07.

# TEMPERATURE DIFFERENCE, NANSEN - S.T.D., °C

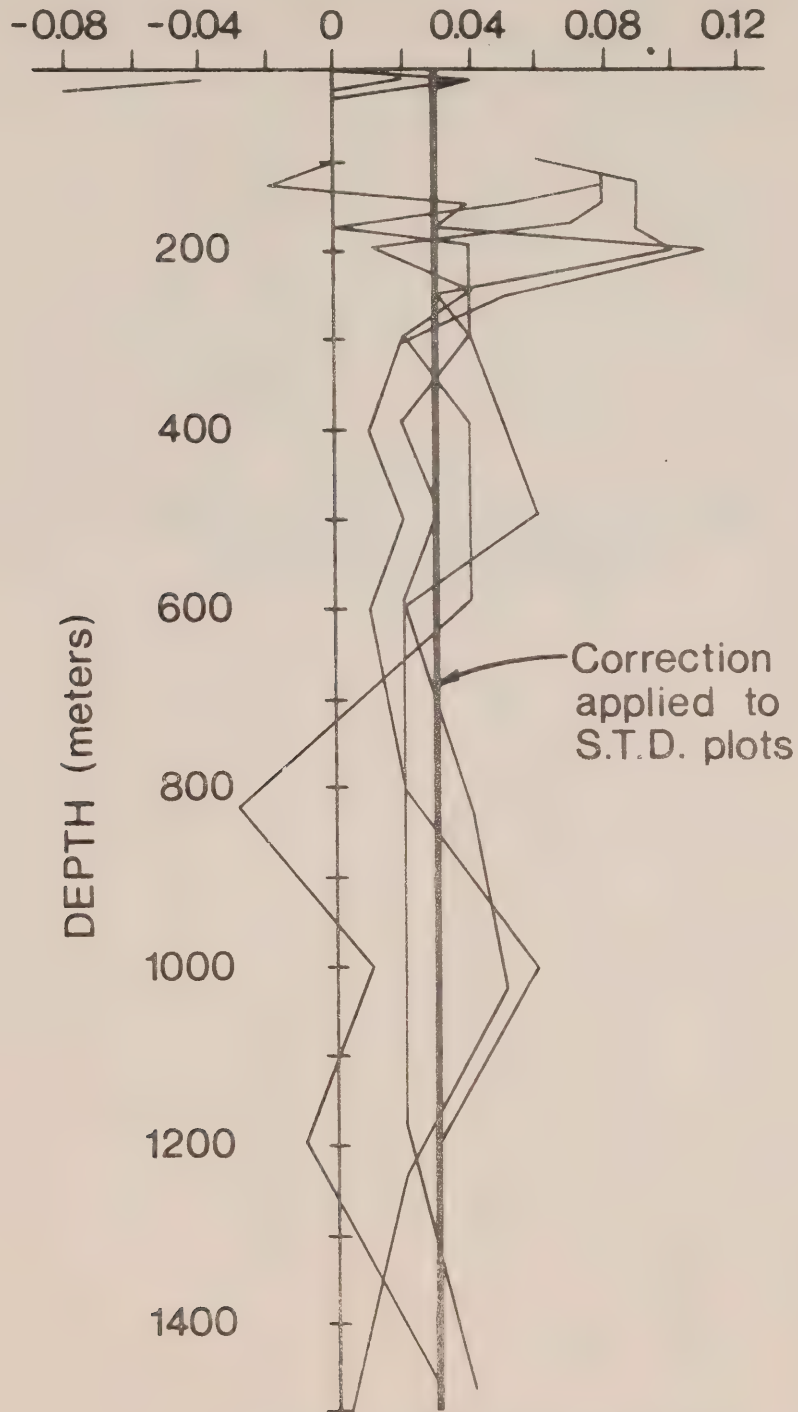


Figure 3 Profiles of the temperature difference between Reversing Thermometers and a Bissett-Berman Model 9006 STD Ref. No. 70-07.





COMPOSITE PLOTS OF TEMPERATURE, SALINITY  
AND DISSOLVED OXYGEN VS DEPTH  
(P-70-7)

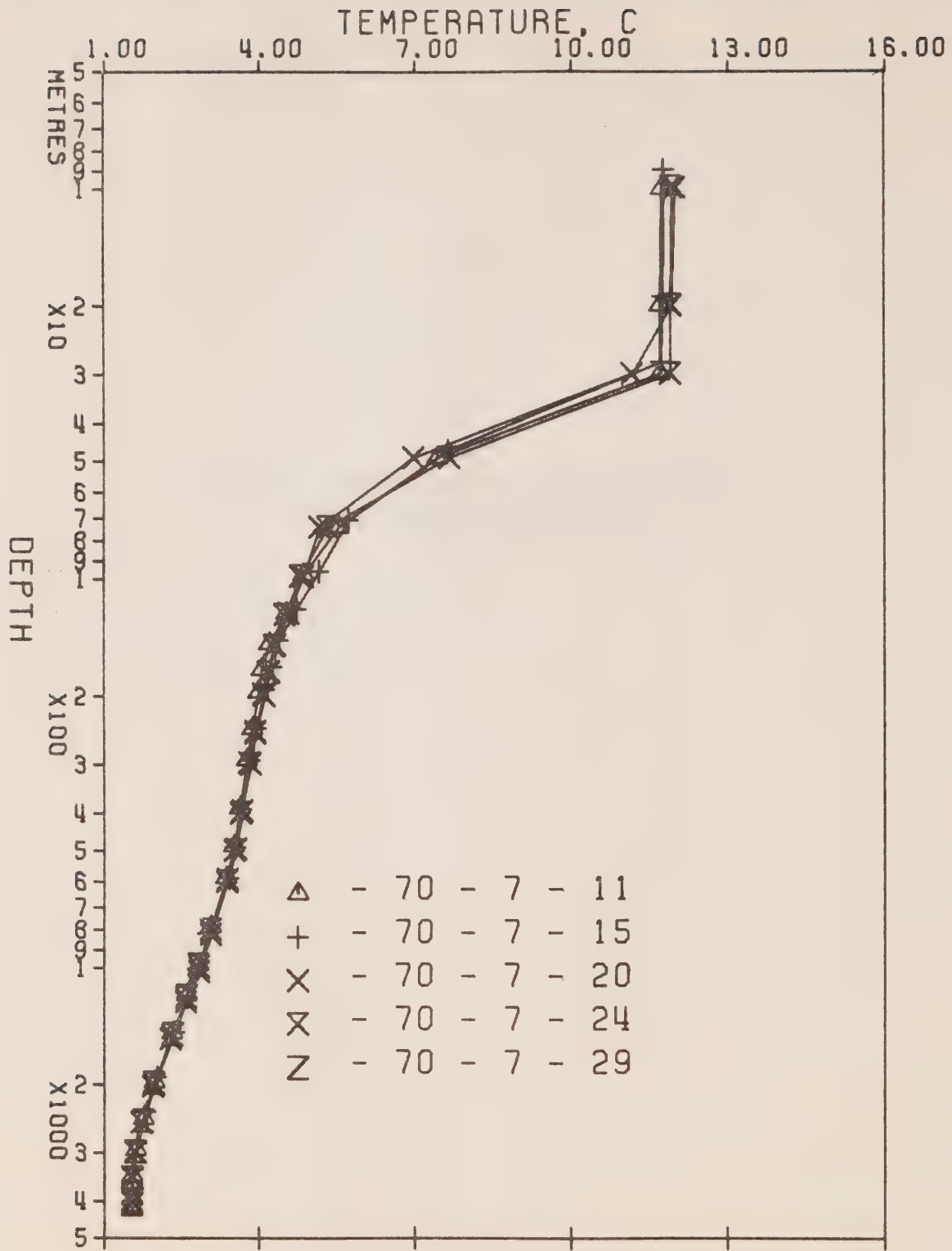


Figure 4 Composite plot of temperature vs  $\log_{10}$  depth P-70-7.

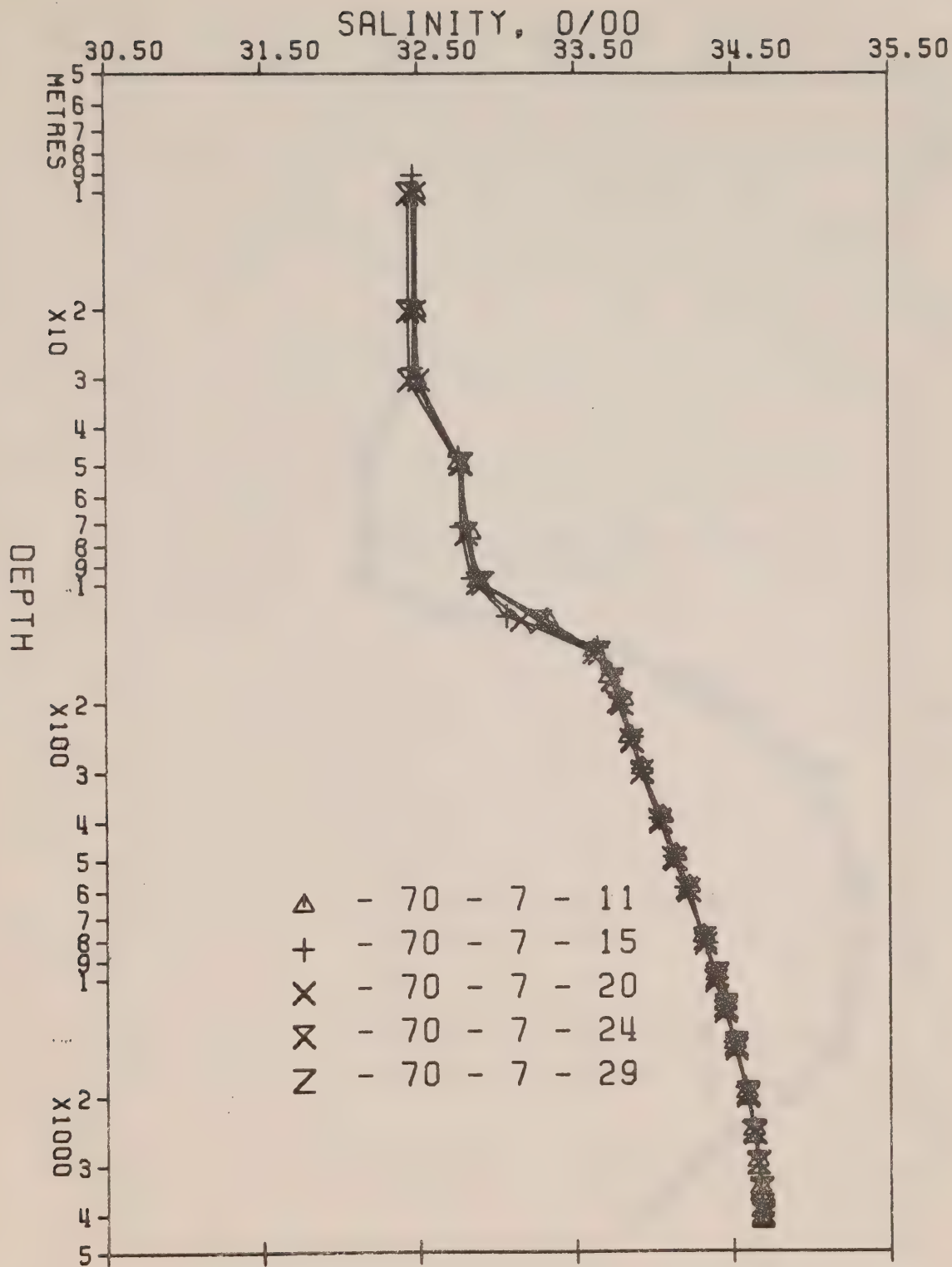


Figure 5 Composite plot of salinity vs  $\log_{10}$  depth P-70-7.

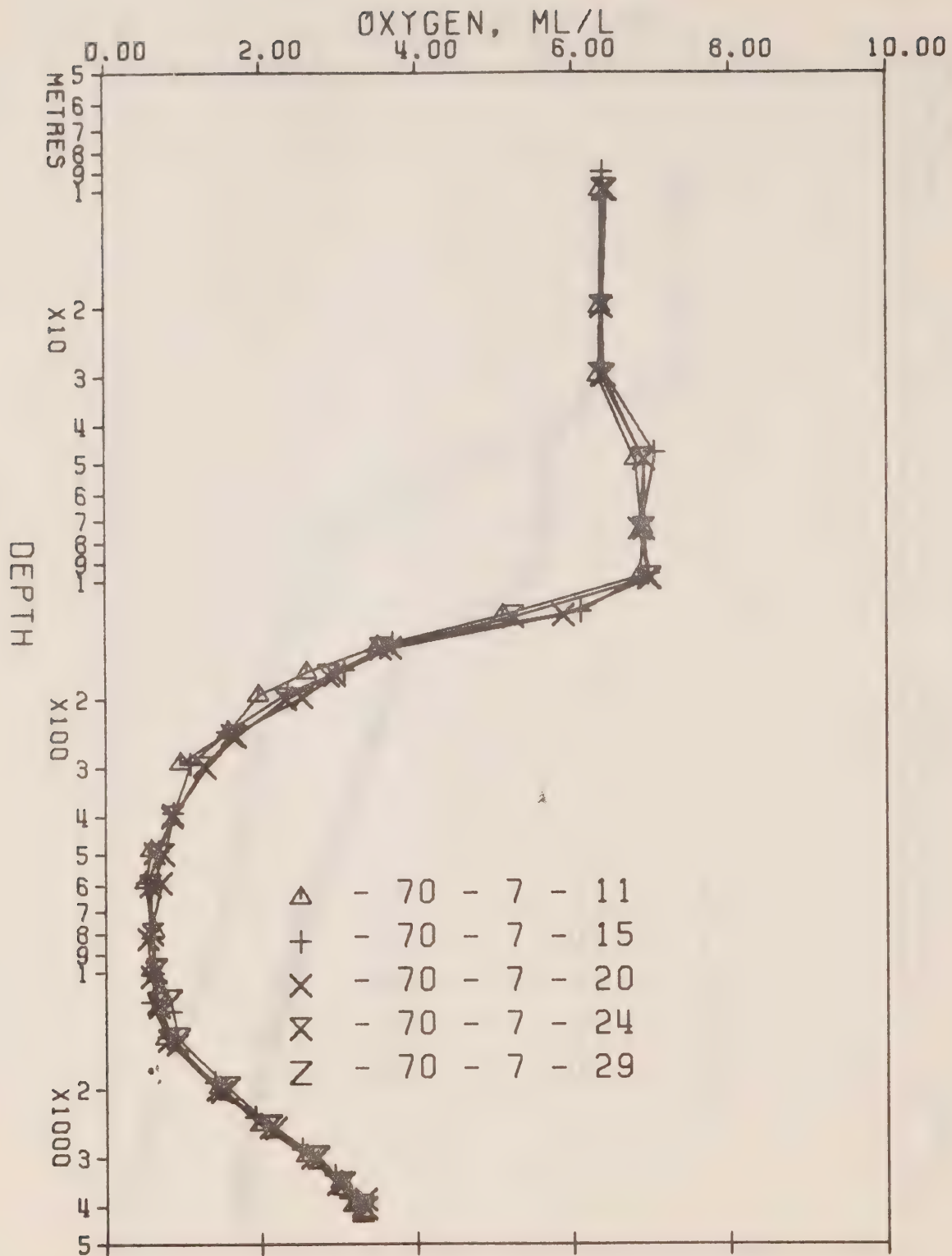
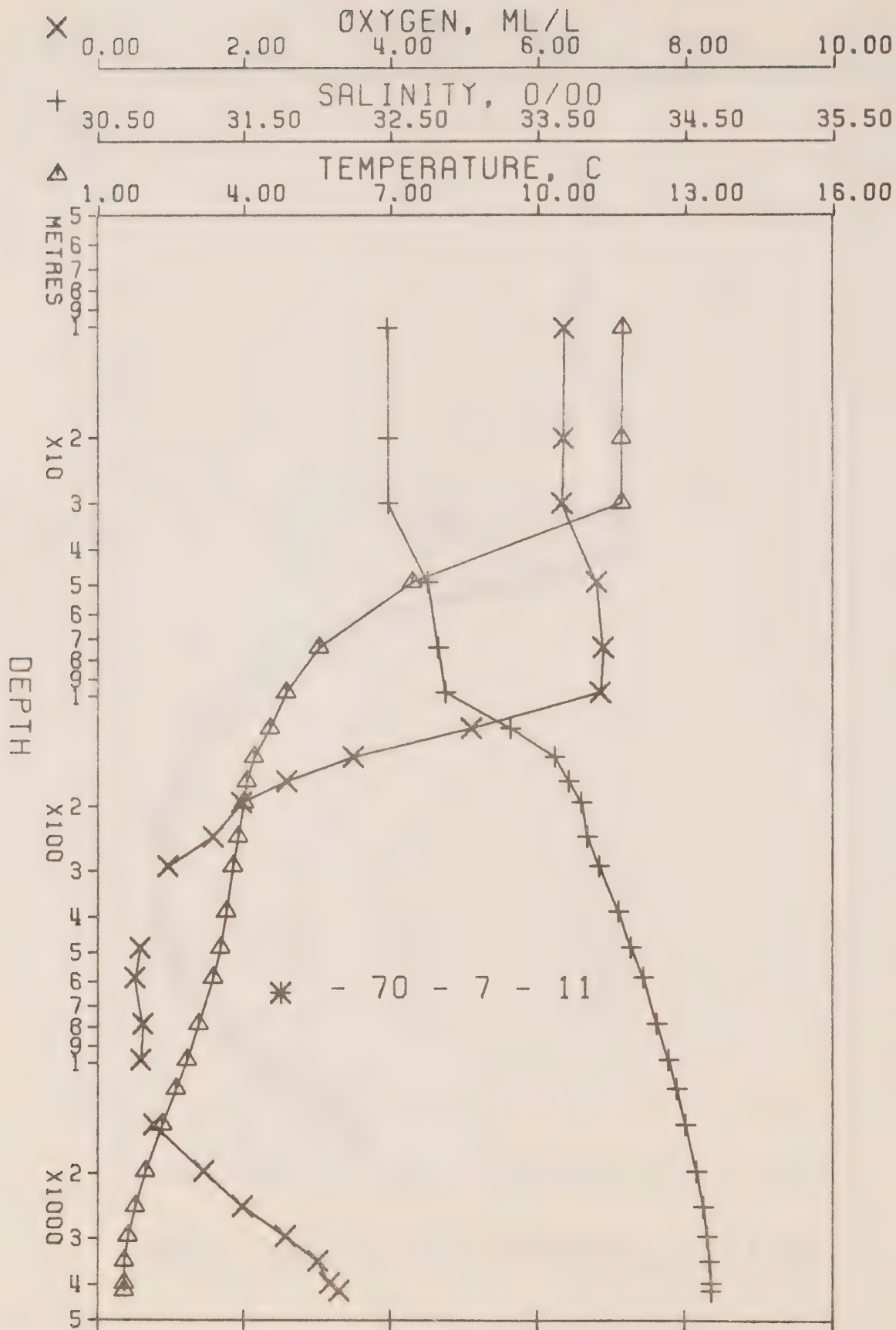


Figure 6 Composite plot of oxygen vs  $\log_{10}$  depth P-70-7.



RESULTS OF NANSEN BOTTLE CASTS  
(P-70-7)



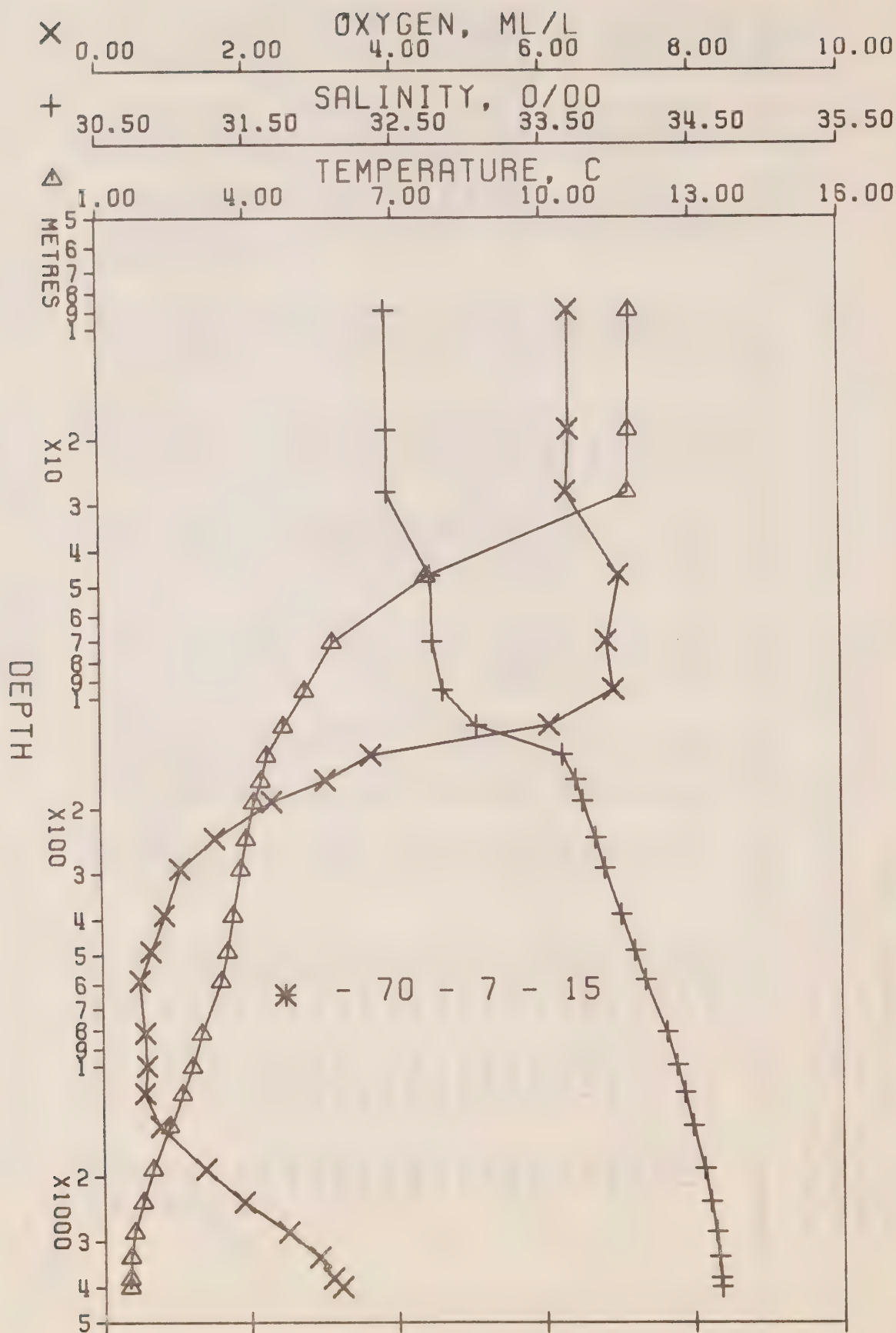
PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 7- 11 DATE 22/ 9/70

POSITION 50-0.0 N, 144-58.0 W GMT 18.7

HYDROGRAPHIC CAST DATA

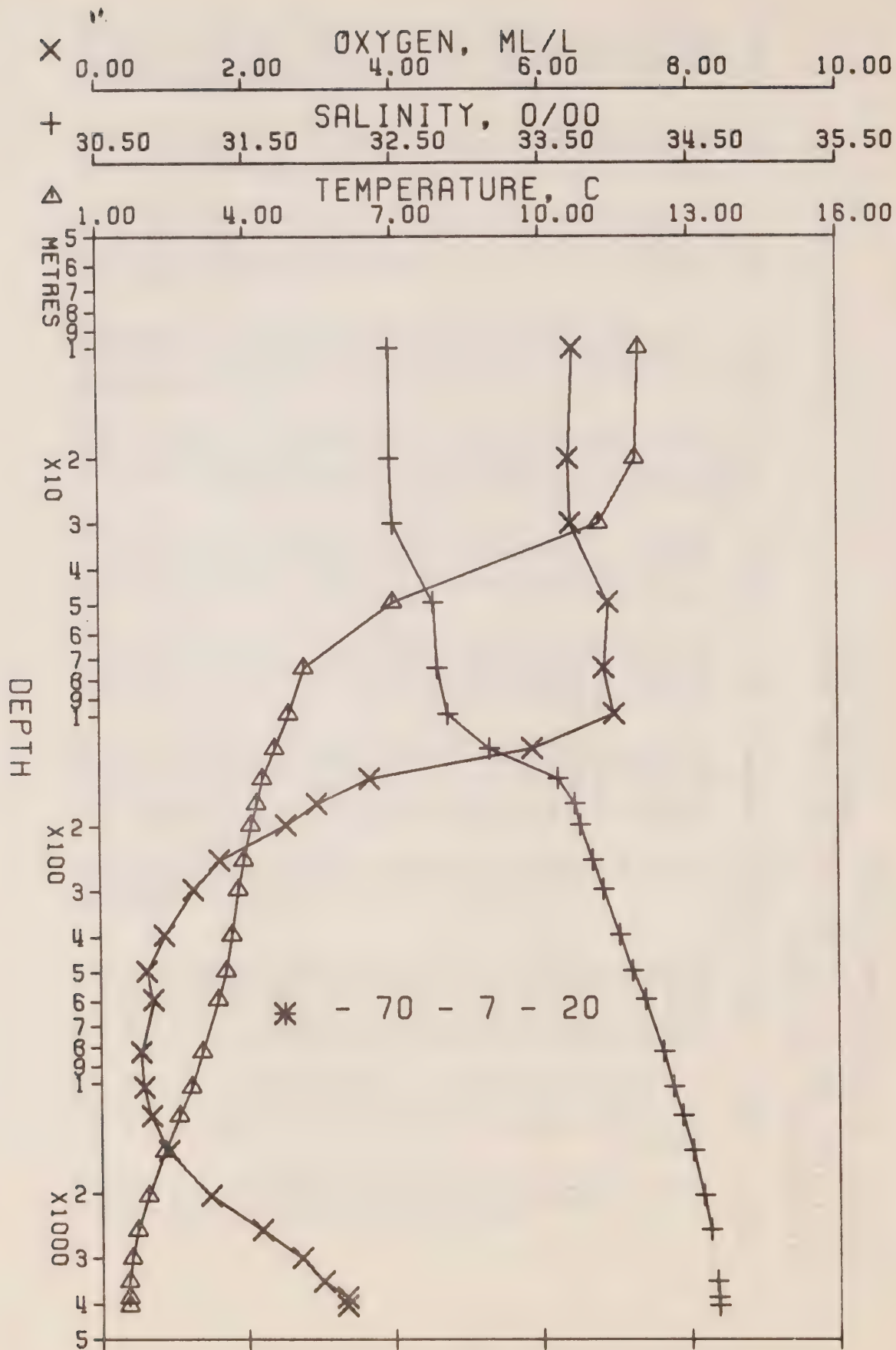
PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	POT. EN	OXY	SOUND
0	11.72	32.485	0	24.714	324.2	11.72	323.9	0.0	0.0	6.36	1493.
10	11.72	32.485	10	24.714	324.4	11.72	323.9	0.33	0.02	6.36	1493.
20	11.70	32.487	20	24.719	324.1	11.70	323.4	0.65	0.07	6.35	1494.
30	11.70	32.487	30	24.719	324.4	11.70	323.4	0.98	0.15	6.33	1494.
49	7.44	32.761	49	25.621	238.6	7.44	237.6	1.52	0.37	6.80	1479.
74	5.53	32.829	74	25.920	210.2	5.52	209.1	2.07	0.72	6.89	1472.
99	4.86	32.880	98	26.037	199.2	4.85	198.0	2.57	1.15	6.85	1469.
124	4.53	33.322	123	26.423	162.8	4.52	161.4	3.03	1.67	5.10	1469.
148	4.19	33.619	147	26.694	137.2	4.18	135.7	3.38	2.17	3.49	1468.
172	4.05	33.713	171	26.783	128.9	4.04	127.2	3.70	2.69	2.58	1468.
196	3.98	33.800	195	26.859	121.9	3.97	119.9	4.01	3.26	1.96	1468.
245	3.87	33.842	243	26.904	118.0	3.85	115.7	4.58	4.56	1.57	1469.
294	3.76	33.921	292	26.977	111.4	3.74	108.6	5.15	6.12	0.95	1469.
392	3.62	34.051	389	27.095	101.0	3.59	97.5	6.19	9.74	0.0	1470.
491	3.51	34.136	487	27.173	94.3	3.48	90.0	7.15	14.08	0.57	1472.
593	3.36	34.221	588	27.255	87.1	3.32	82.2	8.07	19.18	0.50	1473.
792	3.06	34.310	785	27.354	78.7	3.01	72.7	9.72	30.78	0.61	1475.
592	2.81	34.390	982	27.440	71.3	2.74	64.4	11.21	44.33	0.58	1477.
1190	2.59	34.444	1178	27.502	66.0	2.51	58.5	12.56	59.44	0.0	1480.
1490	2.31	34.503	1474	27.573	60.1	2.21	51.6	14.45	85.22	0.76	1483.
1992	1.96	34.581	1968	27.664	52.4	1.82	42.8	17.25	134.93	1.45	1490.
2496	1.75	34.623	2463	27.714	48.6	1.57	37.9	19.78	192.84	1.98	1498.
3005	1.60	34.648	2961	27.745	46.4	1.38	34.6	22.19	260.24	2.57	1506.
3517	1.53	34.667	3462	27.765	45.5	1.26	32.4	24.53	338.16	3.01	1514.
4034	1.53	34.675	3966	27.772	46.3	1.20	31.5	26.90	429.14	3.17	1523.
4241	1.53	34.675	4168	27.772	46.8	1.18	31.3	27.86	469.87	3.30	1527.



PACIFIC OCEANOGRAPHIC GROUP  
 REFERENCE NO. 70- 7- 15 DATE 28/ 9/70  
 POSITION 50- 1.0 N. 144-54.0 W GMT 18.4  
 HYDROGRAPHIC CAST DATA

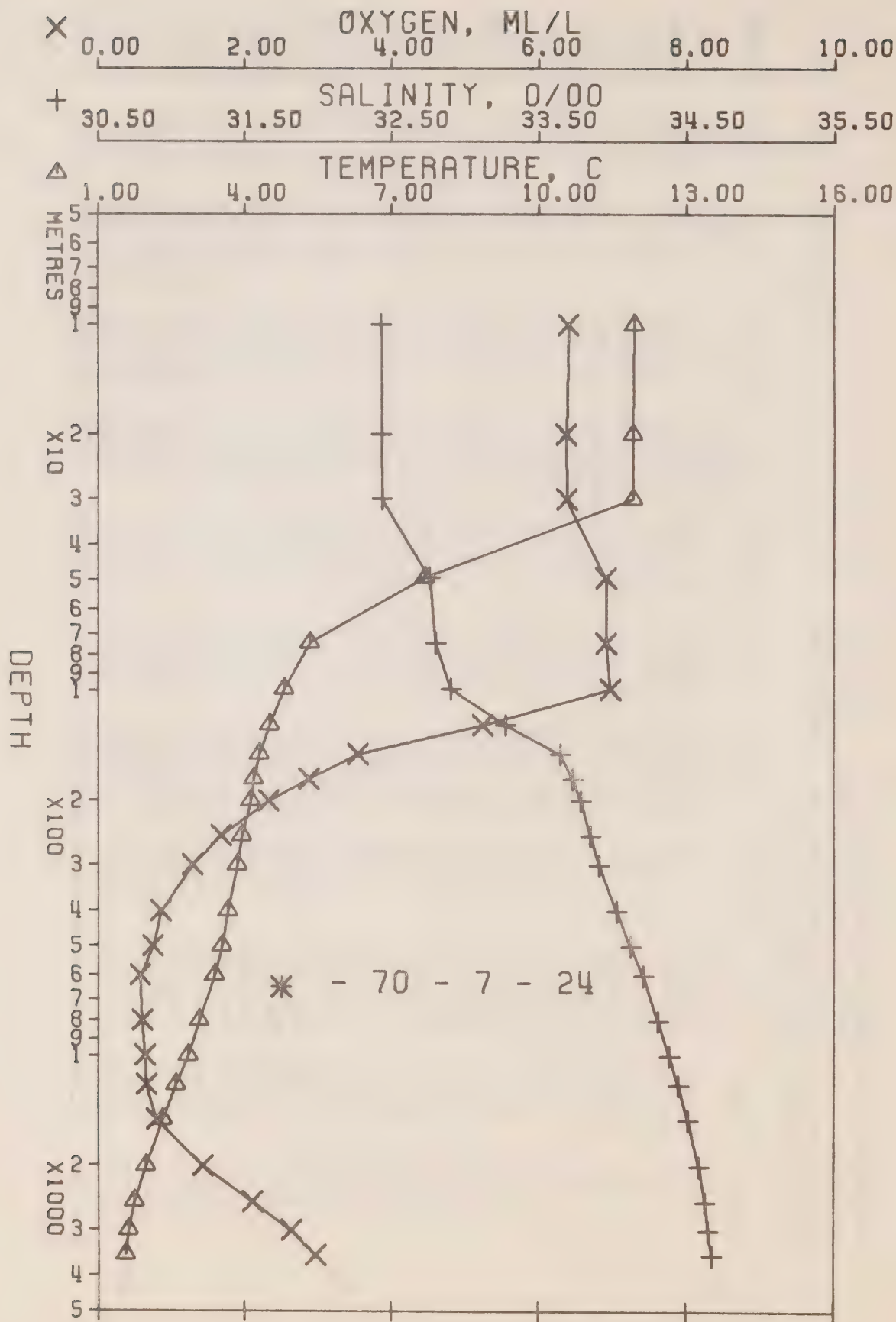
PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	PCT. FN	OXY	SOUND
0	11.78	32.464	0	24.686	326.8	11.78	326.6	0.0	0.0	6.35	1494.
9	11.78	32.463	9	24.686	327.1	11.78	326.7	0.30	0.01	6.39	1494.
19	11.75	32.468	19	24.695	326.4	11.75	325.8	0.62	0.06	6.39	1494.
28	11.73	32.467	28	24.698	326.3	11.73	325.4	0.92	0.13	6.35	1494.
47	7.65	32.760	47	25.591	241.4	7.65	240.5	1.47	0.34	7.05	1479.
71	5.73	32.772	71	25.852	216.7	5.72	215.6	2.01	0.67	6.88	1472.
97	5.16	32.842	96	25.973	205.2	5.15	204.0	2.54	1.12	6.97	1470.
121	4.72	33.067	120	26.200	183.9	4.71	182.5	3.01	1.65	6.10	1469.
145	4.38	33.641	144	26.692	137.4	4.37	135.8	3.40	2.17	3.69	1469.
170	4.25	33.732	169	26.777	129.5	4.24	127.7	3.73	2.70	3.07	1469.
194	4.10	33.776	193	26.828	124.9	4.09	122.9	4.04	3.27	2.34	1469.
245	3.94	33.859	243	26.910	117.5	3.92	115.0	4.65	4.64	1.56	1469.
295	3.82	33.922	293	26.972	111.9	3.80	109.2	5.22	6.23	1.08	1469.
395	3.66	34.030	392	27.074	102.9	3.63	99.5	6.29	9.99	0.86	1471.
495	3.53	34.122	491	27.160	95.5	3.50	91.3	7.28	14.48	0.67	1472.
594	3.40	34.191	589	27.227	89.8	3.36	84.8	8.20	19.57	0.52	1473.
625	3.00	34.332	817	27.377	76.6	2.94	70.5	10.11	33.33	0.59	1475.
1018	2.80	34.394	1008	27.444	71.0	2.73	64.1	11.53	46.69	0.61	1478.
1207	2.59	34.446	1195	27.504	65.9	2.51	58.3	12.82	61.38	0.58	1480.
1485	2.35	34.498	1469	27.566	60.9	2.25	52.3	14.58	85.51	0.79	1484.
1940	2.00	34.575	1917	27.656	53.1	1.87	43.6	17.16	130.52	1.40	1490.
2395	1.79	34.615	2364	27.704	49.4	1.62	38.8	19.48	181.80	1.92	1497.
2891	1.62	34.649	2850	27.744	46.3	1.41	34.8	21.84	245.36	2.52	1504.
3296	1.54	34.664	3334	27.762	45.5	1.28	32.8	24.10	317.65	2.94	1512.
3882	1.53	34.675	3818	27.772	45.9	1.22	31.6	26.36	401.39	3.12	1521.
4106	1.53	34.679	4036	27.775	46.2	1.19	31.1	27.39	443.34	3.24	1525.





PACIFIC OCEANOGRAPHIC GROUP  
REFERENCE NO. 70- 7- 20 DATE 5/10/70  
POSITION 50- 1.0 N. 145- 3.0 W GMT 18.9  
HYDROGRAPHIC CAST DATA

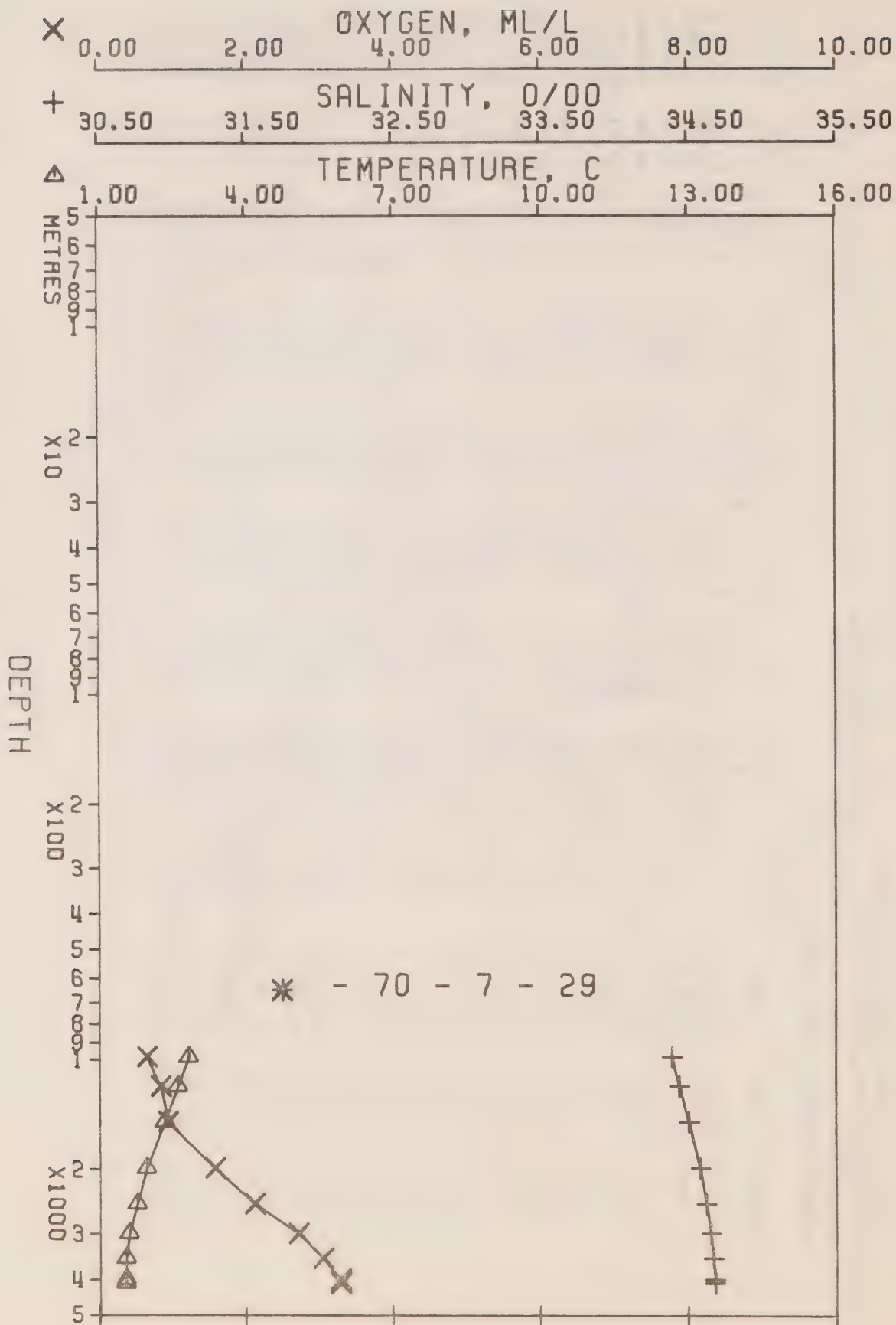
PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	POT. EN	OXY	SOUND
0	11.95	32.461	0	24.653	330.0	11.95	329.7	0.0	0.0	6.44	1494.
10	11.99	32.483	10	24.662	329.3	11.99	328.8	0.33	0.02	6.44	1494.
20	11.92	32.485	20	24.677	328.1	11.92	327.5	0.66	0.07	6.38	1494.
30	11.17	32.506	30	24.829	313.8	11.17	312.9	0.99	0.15	6.41	1492.
49	6.98	32.782	49	25.701	230.9	6.98	230.0	1.51	0.36	6.91	1477.
74	5.17	32.804	74	25.942	208.0	5.16	207.0	2.04	0.70	6.85	1470.
100	4.96	32.877	99	26.035	199.4	4.85	198.2	2.56	1.16	6.99	1469.
124	4.57	33.153	123	26.285	175.9	4.56	174.5	3.02	1.68	5.88	1469.
149	4.32	33.615	148	26.677	138.8	4.31	137.2	3.41	2.22	3.67	1469.
174	4.20	33.729	173	26.780	129.2	4.19	127.4	3.74	2.77	2.95	1469.
199	4.08	33.764	198	26.820	125.6	4.07	123.6	4.06	3.38	2.53	1469.
249	3.93	33.850	247	26.904	118.1	3.91	115.7	4.66	4.76	1.62	1469.
299	3.81	33.918	297	26.970	112.1	3.79	109.3	5.24	6.38	1.26	1469.
399	3.67	34.032	396	27.075	103.0	3.64	99.4	6.31	10.19	0.86	1471.
499	3.55	34.113	495	27.151	96.4	3.52	92.1	7.31	14.75	0.62	1472.
599	3.38	34.202	594	27.238	88.7	3.34	83.8	8.24	19.92	0.71	1473.
832	3.06	34.320	824	27.362	78.2	3.00	71.9	10.16	33.94	0.54	1476.
1037	2.83	34.387	1027	27.436	72.0	2.76	64.8	11.70	48.62	0.58	1478.
1242	2.58	34.446	1229	27.505	66.0	2.50	58.2	13.11	65.00	0.68	1480.
1547	2.27	34.513	1530	27.585	59.2	2.17	50.5	15.01	92.04	0.91	1484.
2051	1.93	34.587	2026	27.671	51.8	1.79	42.1	17.78	142.87	1.48	1491.
2550	1.71	34.630	2516	27.722	47.8	1.53	37.1	20.25	200.80	2.18	1499.
3043	1.58	34.655*	2999	27.752	45.7	1.35	34.0	22.54	266.20	2.72	1507.
3530	1.53	34.669	3475	27.767	45.4	1.26	32.3	24.75	340.29	3.01	1515.
3915	1.52	34.677	3850	27.774	45.6	1.21	31.3	26.50	406.51	3.33	1521.
4107	1.52	34.678	4037	27.775	46.2	1.18	31.1	27.38	442.50	3.33	1525.



PACIFIC OCEANOGRAPHIC GROUP  
REFERENCE NO. 70- 7- 24 DATE 12/10/70  
POSITION 50- 0.0 N. 144-57.0 W GMT 18.7  
HYDROGRAPHIC CAST DATA

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	PCT. EN	OXY	SOUND
0	11.94	32.436	0	24.635	331.7	11.94	331.5	0.0	0.0	6.39	1494.
10	11.93	32.436	10	24.637	331.7	11.93	331.3	0.33	0.02	6.40	1494.
20	11.91	32.436	20	24.641	331.6	11.91	330.8	0.67	0.07	6.37	1494.
30	11.91	32.441	30	24.644	331.4	11.91	330.5	1.00	0.15	6.38	1494.
49	7.67	32.766	49	25.593	241.2	7.67	240.3	1.56	0.37	6.91	1480.
74	5.32	32.805	74	25.926	209.6	5.31	208.6	2.11	0.72	6.91	1471.
100	4.79	32.909	99	26.068	196.3	4.78	195.1	2.62	1.18	6.97	1469.
125	4.49	33.279	124	26.393	165.7	4.48	164.3	3.07	1.70	5.24	1469.
150	4.29	33.652	149	26.710	135.7	4.28	134.1	3.45	2.23	3.54	1469.
175	4.16	33.734	174	26.788	128.5	4.15	126.6	3.78	2.77	2.87	1469.
201	4.10	33.788	200	26.837	124.0	4.09	122.0	4.11	3.41	2.32	1469.
252	3.92	33.855	250	26.909	117.6	3.90	115.1	4.72	4.81	1.67	1469.
302	3.83	33.913	300	26.964	112.8	3.81	109.9	5.30	6.45	1.28	1470.
404	3.64	34.033	401	27.078	102.6	3.61	99.0	6.39	10.40	0.85	1471.
505	3.52	34.129	501	27.166	94.9	3.49	90.6	7.39	15.01	0.74	1472.
605	3.37	34.216	600	27.250	87.7	3.33	82.7	8.30	20.17	0.57	1473.
805	3.06	34.316	798	27.359	78.3	3.01	72.3	9.95	32.04	0.60	1475.
1008	2.83	34.391	998	27.439	71.5	2.76	64.5	11.46	46.02	0.64	1478.
1210	2.58	34.451	1198	27.509	65.5	2.50	57.8	12.85	61.67	0.66	1480.
1515	2.31	34.515	1498	27.583	59.3	2.21	50.7	14.74	87.92	0.80	1484.
2024	1.96	34.588	1999	27.669	52.0	1.82	42.3	17.55	138.64	1.43	1491.
2536	1.72	34.631	2502	27.722	47.8	1.54	37.1	20.09	197.64	2.11	1499.
3050	1.60	34.652	3005	27.748	46.3	1.37	34.3	22.49	266.12	2.64	1507.
3566	1.54	34.673	3510	27.769	45.3	1.26	32.0	24.86	345.79	2.97	1515.







PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 7- 29 DATE 27/10/70

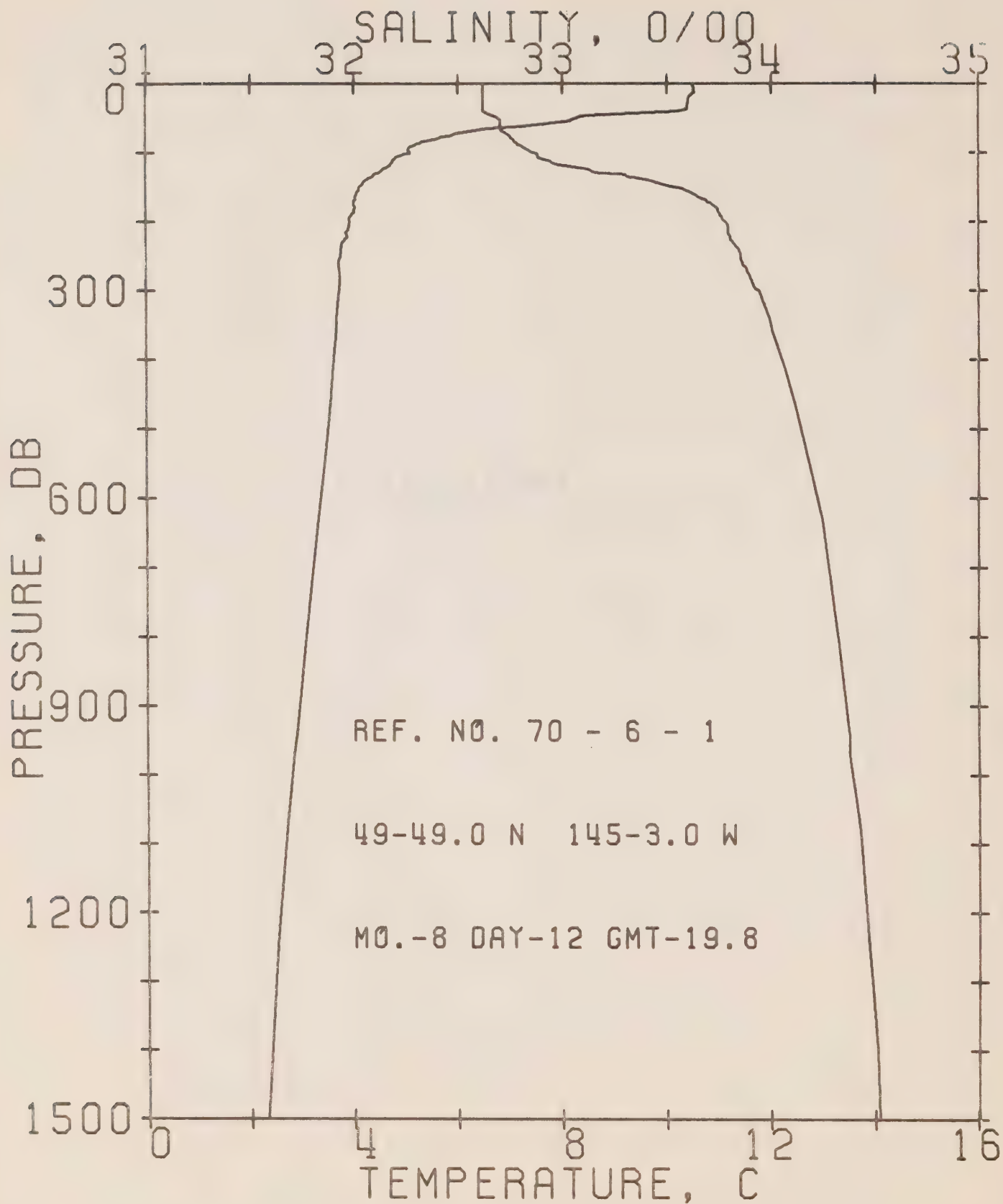
POSITION 49-59.5 N, 145- 1.9 W GMT 18.0

HYDROGRAPHIC CAST DATA

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	POT. EN	OXY	SOUND
994	2.81	34.394	984	27.443	71.0	2.74	64.2	0.0	0.0	0.65	1477.
1195	2.59	34.444	1182	27.502	66.1	2.51	58.5	1.64	10.66	0.84	1480.
1498	2.32	34.510	1481	27.578	59.7	2.22	51.1	3.55	36.76	0.94	1484.
2005	1.95	34.587	1980	27.669	51.9	1.81	42.3	6.35	86.81	1.58	1491.
2516	1.75	34.627	2482	27.717	48.3	1.57	37.5	8.90	145.53	2.12	1498.
3028	1.59	34.654	2983	27.750	45.9	1.37	34.1	11.29	213.28	2.72	1506.
3541	1.53	34.671	3485	27.768	45.2	1.26	32.1	13.62	291.23	3.05	1515.
4056	1.53	34.679	3987	27.775	46.1	1.20	31.1	15.97	382.36	3.29	1524.
4158	1.52	34.681	4087	27.777	46.0	1.18	30.8	16.45	402.16	3.29	1525.



RESULTS OF STD CASTS  
(P-70-6)



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 6- 1

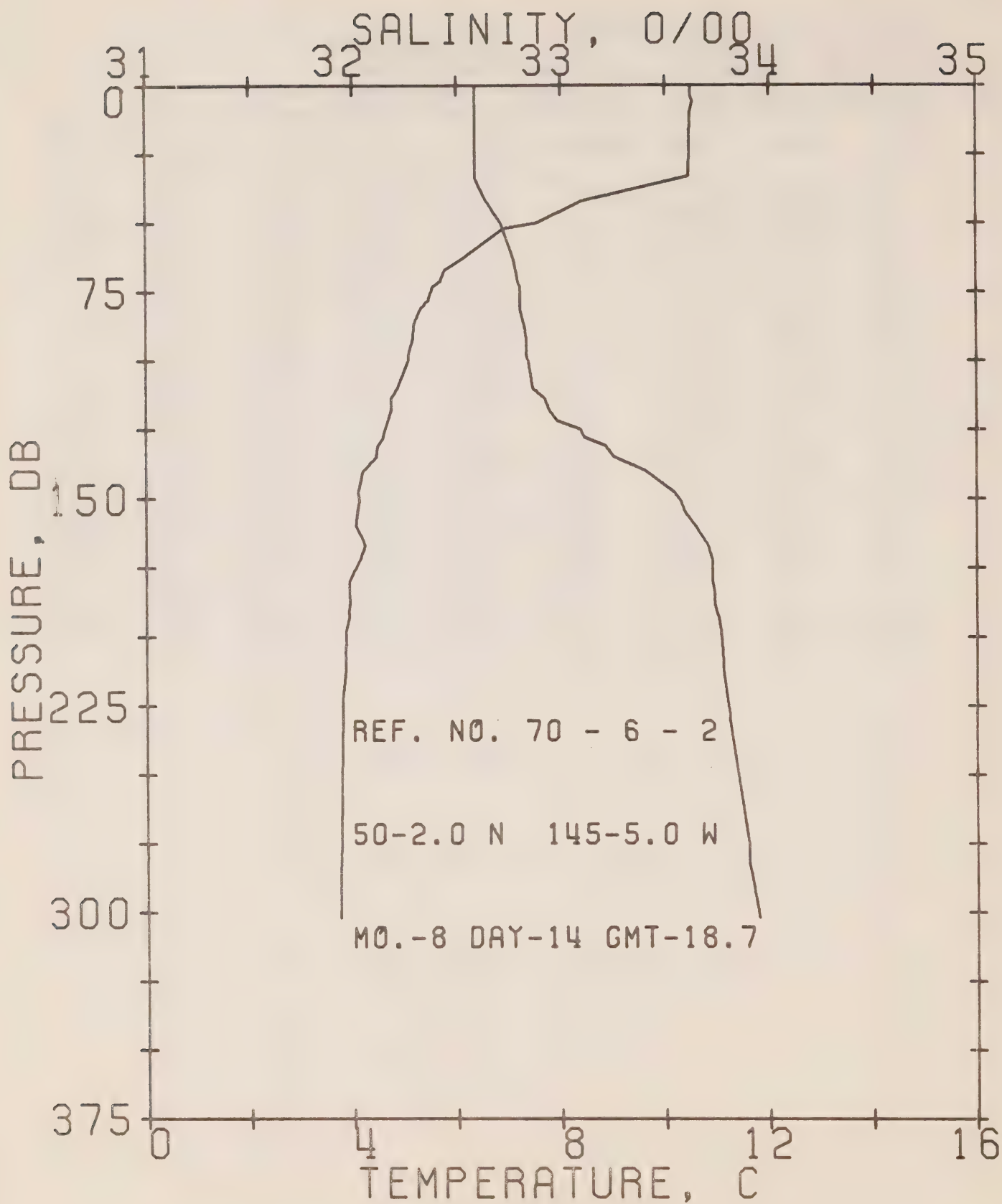
DATE 12/ 8/70

POSITION 49-49.0N, 145- 3.0W GMT 19.8

RESULTS OF STP CAST 119 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	10.52	32.62	0	25.03	293.7	0.0	0.0	1489.
10	10.53	32.62	10	25.03	294.3	0.29	0.01	1489.
20	10.45	32.62	20	25.04	293.2	0.59	0.06	1489.
30	10.43	32.62	30	25.05	293.1	0.88	0.13	1489.
50	8.29	32.70	50	25.45	254.8	1.44	0.36	1482.
75	5.89	32.75	75	25.82	219.8	2.04	0.74	1473.
100	5.11	32.87	99	26.00	202.7	2.56	1.21	1470.
125	4.58	33.14	124	26.27	177.0	3.04	1.76	1469.
150	4.14	33.54	149	26.64	142.3	3.44	2.31	1468.
175	4.01	33.73	174	26.80	127.5	3.77	2.86	1468.
200	3.95	33.79	199	26.85	122.6	4.08	3.46	1468.
225	3.85	33.81	223	26.88	120.0	4.39	4.11	1468.
250	3.76	33.86	248	26.93	115.6	4.68	4.82	1468.
300	3.73	33.95	298	27.00	108.9	5.24	6.40	1469.
400	3.62	34.06	397	27.10	100.4	6.29	10.12	1471.
500	3.51	34.15	496	27.18	93.4	7.26	14.56	1472.
600	3.37	34.23	595	27.26	86.8	8.16	19.60	1473.
800	3.07	34.33	793	27.36	77.7	9.80	31.22	1475.
1000	2.80	34.39	990	27.44	70.9	11.28	44.80	1477.
1200	2.56	34.46	1188	27.52	64.7	12.63	59.88	1480.
1500	2.29	34.52	1484	27.59	58.7	14.47	85.12	1484.





PACIFIC OCEANOGRAPHIC GROUP

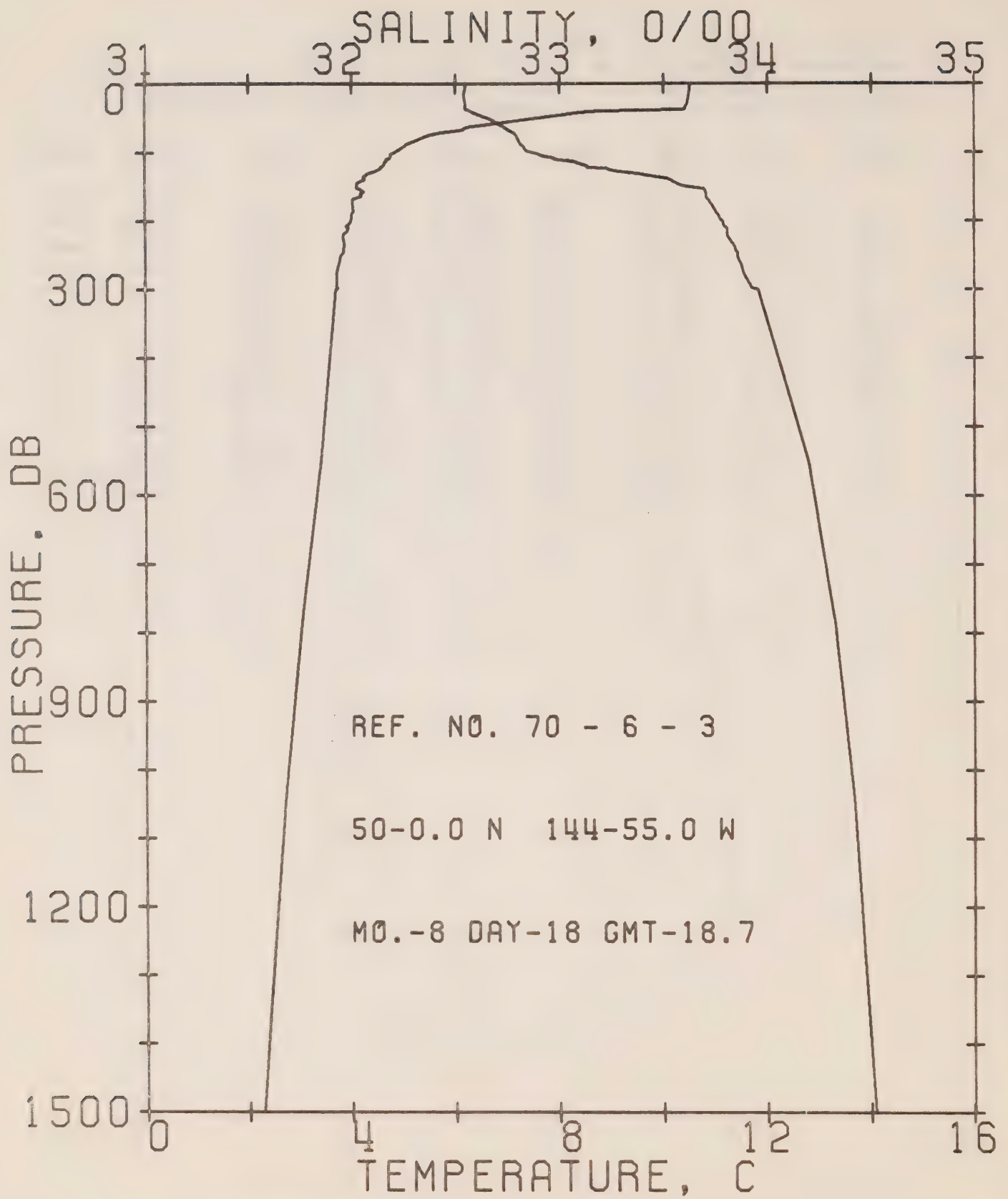
REFERENCE NO. 70- 6- 2

DATE 14/ 8/70

POSITION 50- 2.0N, 145- 5.0W GMT 18.7

RESULTS OF STD CAST 50 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	10.50	32.59	0	25.01	295.6	0.0	0.0	1489.
10	10.50	32.59	10	25.01	296.0	0.30	0.02	1489.
20	10.49	32.59	20	25.01	296.0	0.59	0.06	1489.
30	10.48	32.59	30	25.01	296.1	0.89	0.14	1490.
50	7.56	32.72	50	25.57	243.2	1.43	0.35	1479.
75	5.53	32.81	75	25.90	211.6	1.99	0.71	1472.
100	5.09	32.85	99	25.99	203.9	2.50	1.17	1470.
125	4.64	33.10	124	26.24	180.6	2.99	1.73	1469.
150	4.12	33.57	149	26.66	140.2	3.39	2.29	1468.
175	4.08	33.73	174	26.79	127.9	3.73	2.84	1468.
200	3.87	33.77	199	26.85	122.9	4.04	3.44	1468.
225	3.79	33.80	223	26.88	119.9	4.35	4.10	1468.
250	3.76	33.85	248	26.92	116.4	4.64	4.81	1468.
300	3.72	33.95	298	27.00	109.2	5.21	6.39	1469.



PACIFIC OCEANOGRAPHIC GROUP

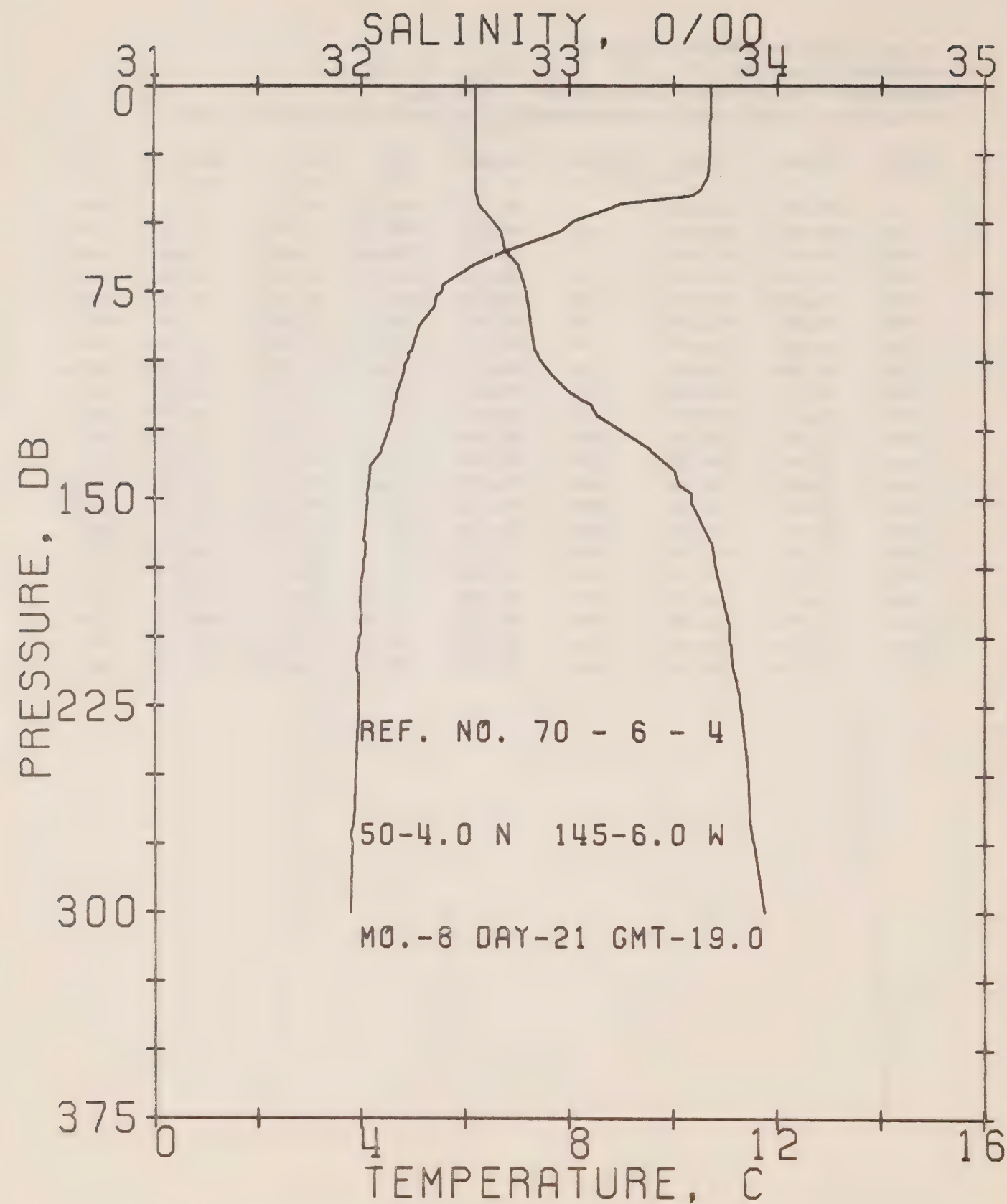
REFERENCE NO. 70- 6- 3

DATE 18/ 8/70

POSITION 50- 0.0N, 144-55.0W GMT 18.7

RESULTS OF STP CAST 64 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. FN	SOUND
0	10.54	32.55	0	24.97	299.2	0.0	0.0	1489.
10	10.53	32.54	10	24.97	299.9	0.30	0.02	1489.
20	10.51	32.54	20	24.97	299.8	0.60	0.06	1489.
30	10.48	32.55	30	24.98	299.0	0.90	0.14	1489.
50	7.60	32.66	50	25.52	248.1	1.45	0.36	1479.
75	5.50	32.80	75	25.90	212.0	2.02	0.72	1471.
100	4.84	32.87	99	26.03	199.4	2.54	1.18	1469.
125	4.54	33.24	124	26.36	168.7	3.00	1.71	1469.
150	4.11	33.62	149	26.70	136.3	3.38	2.23	1468.
175	4.03	33.74	174	26.80	127.1	3.70	2.77	1468.
200	3.99	33.79	199	26.85	122.8	4.01	3.37	1468.
225	3.84	33.82	223	26.89	119.2	4.32	4.02	1468.
250	3.82	33.86	248	26.92	116.2	4.61	4.73	1469.
300	3.71	33.96	298	27.01	108.0	5.18	6.32	1469.
400	3.59	34.06	397	27.10	100.3	6.22	10.01	1470.
500	3.47	34.15	496	27.19	92.7	7.18	14.42	1472.
600	3.33	34.23	595	27.26	86.3	8.07	19.41	1473.
800	3.01	34.33	793	27.38	76.4	9.70	30.91	1475.
1000	2.76	34.40	990	27.45	69.9	11.16	44.26	1477.
1200	2.55	34.45	1188	27.51	65.0	12.51	59.31	1480.
1500	2.26	34.52	1484	27.59	58.3	14.35	84.60	1483.





PACIFIC OCEANOGRAPHIC GROUP

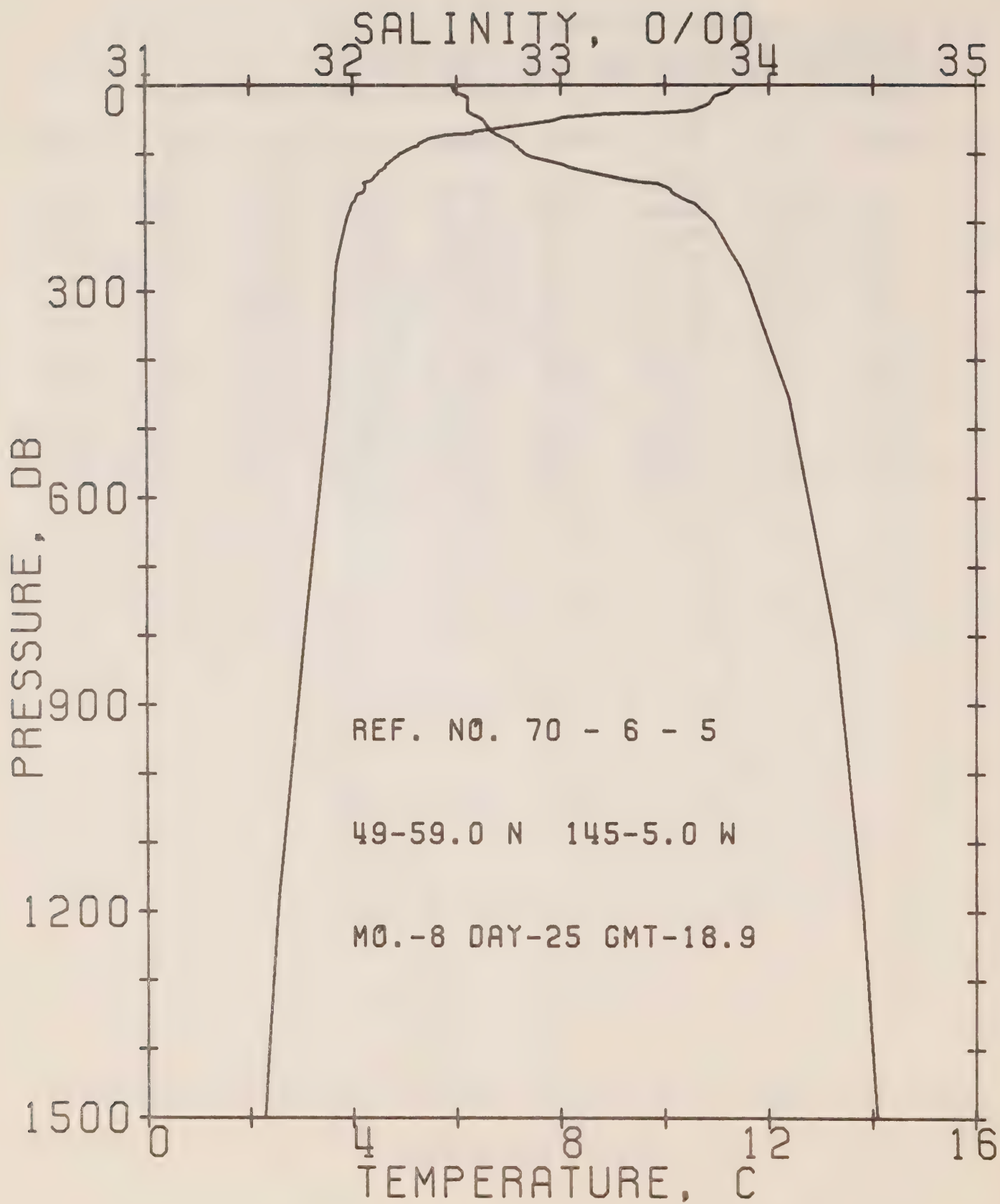
REFERENCE NO. 70- 6- 4

DATE 21/ 8/70

POSITION 50- 4.0N, 145- 6.0W GMT 19.0

RESULTS OF STP CAST 58 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	10.74	32.55	0	24.94	302.5	0.0	0.0	1490.
10	10.74	32.55	10	24.94	302.8	0.30	0.02	1490.
20	10.73	32.55	20	24.94	302.9	0.61	0.06	1490.
30	10.70	32.55	30	24.95	302.7	0.91	0.14	1490.
50	8.06	32.65	50	25.45	255.3	1.48	0.37	1481.
75	6.57	32.80	75	25.89	212.8	2.06	0.74	1472.
100	4.90	32.87	99	26.02	200.4	2.58	1.20	1469.
125	4.54	33.25	124	26.36	168.7	3.04	1.73	1469.
150	4.13	33.59	149	26.68	138.8	3.42	2.25	1468.
175	4.04	33.71	174	26.78	129.3	3.75	2.80	1468.
200	3.97	33.77	199	26.84	124.0	4.07	3.41	1468.
225	3.94	33.82	223	26.88	120.0	4.37	4.07	1469.
250	3.89	33.86	248	26.92	116.8	4.67	4.78	1469.
300	3.78	33.94	298	26.99	110.2	5.24	6.38	1469.



PACIFIC OCEANOGRAPHIC GROUP

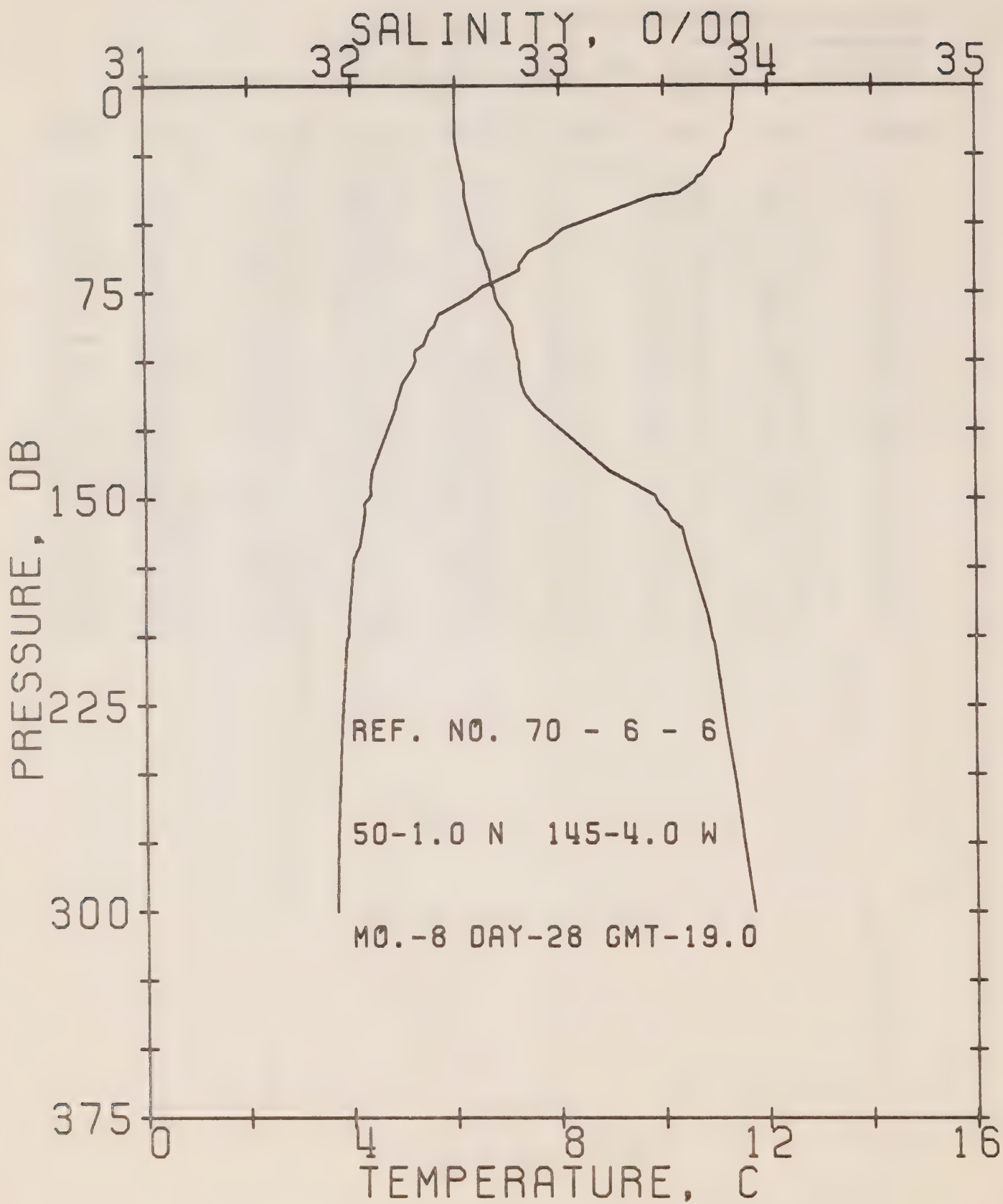
REFERENCE NO. 70- 6- 5

DATE 25/ 8/70

POSITION 49-59.0N, 145- 5.0W GMT 18.9

RESULTS OF STP CAST 42 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	11.34	32.54	0	24.83	313.3	0.0	0.0	1492.
10	11.24	32.50	10	24.81	315.0	0.32	0.02	1492.
20	10.94	32.56	20	24.91	305.8	0.63	0.06	1491.
30	10.78	32.56	30	24.94	303.3	0.93	0.14	1491.
50	7.94	32.63	50	25.45	254.9	1.50	0.37	1480.
75	5.66	32.72	75	25.82	219.8	2.09	0.75	1472.
100	4.94	32.84	99	25.99	203.3	2.62	1.21	1469.
125	4.55	33.12	124	26.26	178.1	3.10	1.76	1469.
150	4.27	33.52	149	26.61	145.3	3.50	2.32	1468.
175	4.00	33.66	174	26.75	132.4	3.85	2.90	1468.
200	3.88	33.74	199	26.82	125.2	4.17	3.51	1468.
225	3.81	33.79	223	26.87	121.2	4.48	4.18	1468.
250	3.74	33.84	248	26.91	117.0	4.77	4.90	1468.
300	3.66	33.92	298	26.99	110.6	5.34	6.49	1469.
400	3.59	34.04	397	27.09	101.8	6.40	10.25	1470.
500	3.48	34.13	496	27.17	94.6	7.38	14.73	1472.
600	3.34	34.19	595	27.23	89.1	8.30	19.86	1473.
800	3.06	34.32	793	27.36	78.1	9.97	31.68	1475.
1000	2.79	34.39	990	27.44	71.4	11.47	45.33	1477.
1200	2.54	34.45	1188	27.51	64.9	12.83	60.54	1480.
1500	2.25	34.52	1484	27.59	58.2	14.67	85.78	1493.



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 6- 6

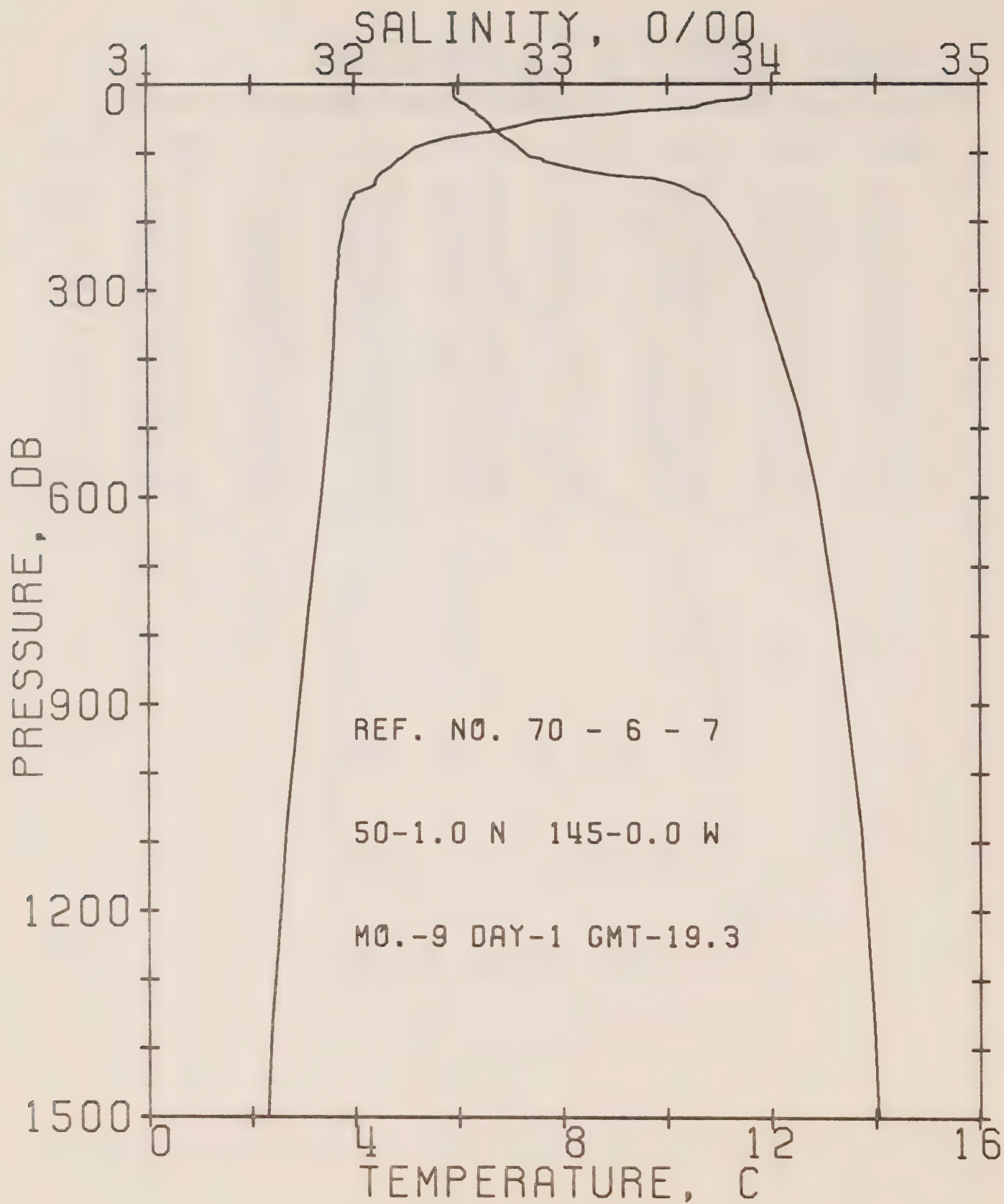
DATE 28/ 8/70

POSITION 50- 1.0N, 145- 4.0W GMT 19.0

RESULTS OF STP CAST 51 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	11.39	32.50	0	24.79	317.1	0.0	0.0	1492.
10	11.35	32.50	10	24.79	316.9	0.32	0.02	1492.
20	11.22	32.50	20	24.82	314.6	0.63	0.06	1492.
30	10.85	32.53	30	24.91	306.4	0.94	0.14	1491.
50	8.38	32.58	50	25.35	264.7	1.52	0.38	1482.
75	6.41	32.69	75	25.71	230.7	2.14	0.77	1475.
100	5.26	32.81	99	25.94	208.8	2.68	1.25	1471.
125	4.70	33.01	124	26.16	187.9	3.18	1.83	1469.
150	4.33	33.47	149	26.56	150.0	3.61	2.42	1469.
175	4.03	33.64	174	26.73	134.0	3.96	3.00	1468.
200	3.93	33.73	199	26.81	126.6	4.29	3.62	1468.
225	3.82	33.78	223	26.86	121.7	4.60	4.29	1468.
250	3.75	33.84	248	26.91	117.3	4.89	5.01	1468.
300	3.67	33.93	298	26.99	109.9	5.46	6.60	1469.





PACIFIC OCEANOGRAPHIC GROUP

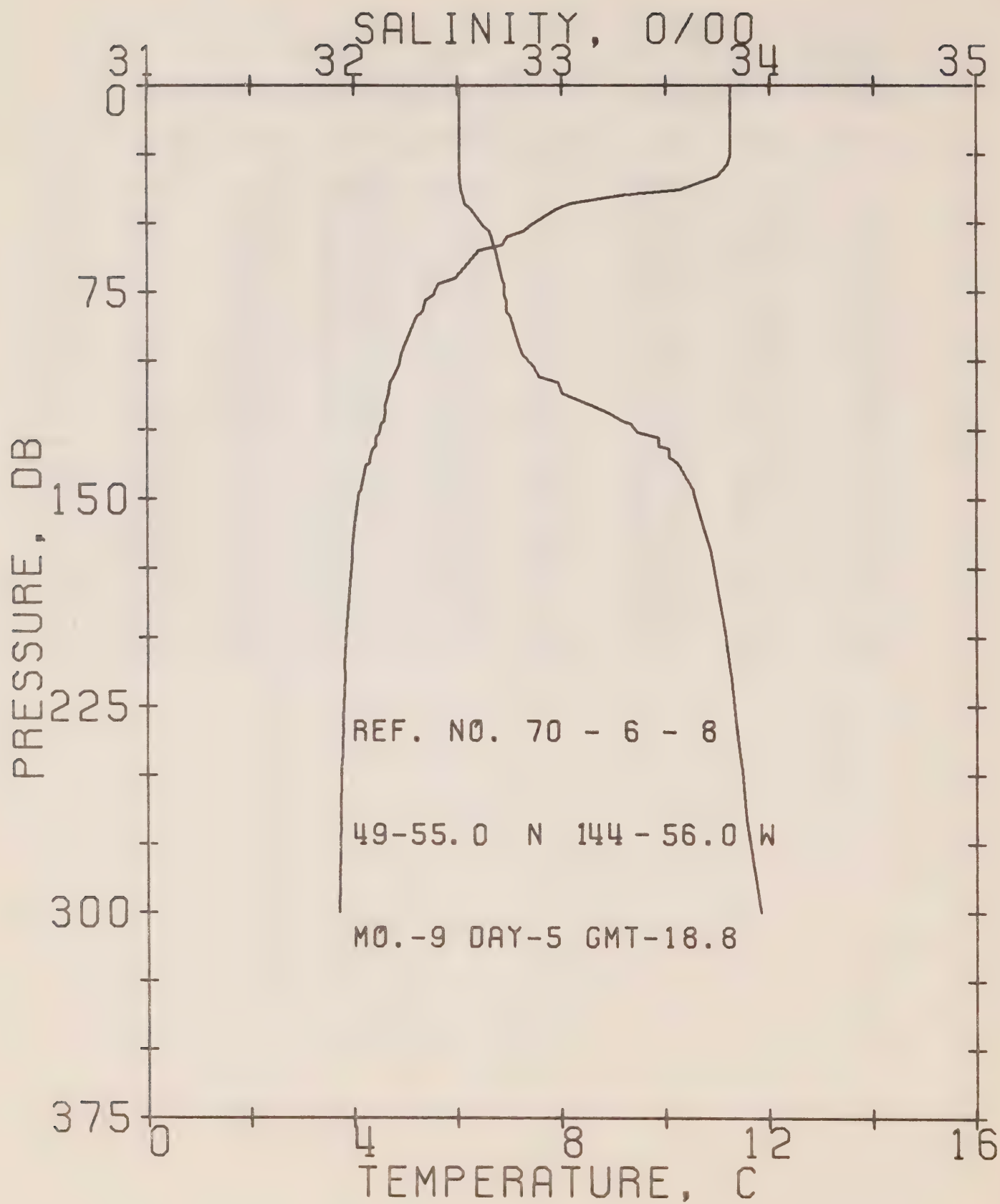
REFERENCE NO. 70- 6- 7

DATE 1/ 9/70

POSITION 50- 1.0N, 145- 0.0W GMT 19.3

RESULTS OF STP CAST 54 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	11.64	32.48	0	24.72	322.9	0.0	0.0	1493.
10	11.64	32.48	10	24.72	323.4	0.32	0.02	1493.
20	11.54	32.49	20	24.75	321.1	0.65	0.07	1493.
30	10.67	32.55	30	24.95	302.3	0.96	0.14	1490.
50	7.84	32.63	50	25.46	253.6	1.51	0.37	1480.
75	5.98	32.72	75	25.78	223.4	2.11	0.75	1473.
100	5.06	32.83	99	25.98	205.1	2.64	1.22	1470.
125	4.62	33.11	124	26.24	179.7	3.13	1.78	1469.
150	4.33	33.59	149	26.66	140.8	3.52	2.32	1469.
175	3.94	33.72	174	26.80	127.1	3.85	2.87	1468.
200	3.82	33.79	199	26.87	121.1	4.16	3.46	1468.
225	3.77	33.84	223	26.91	117.2	4.46	4.11	1468.
250	3.73	33.88	248	26.95	113.9	4.75	4.81	1468.
300	3.66	33.95	298	27.01	107.9	5.30	6.36	1469.
400	3.59	34.06	397	27.10	100.1	6.34	10.05	1470.
500	3.49	34.15	496	27.19	93.0	7.30	14.46	1472.
600	3.36	34.22	595	27.26	87.0	8.20	19.49	1473.
800	3.05	34.32	793	27.36	77.7	9.85	31.15	1475.
1000	2.78	34.40	990	27.45	70.3	11.33	44.66	1477.
1200	2.55	34.45	1188	27.51	65.0	12.67	59.72	1480.
1500	2.28	34.51	1484	27.58	59.2	14.53	85.17	1484.



PACIFIC OCEANOGRAPHIC GROUP

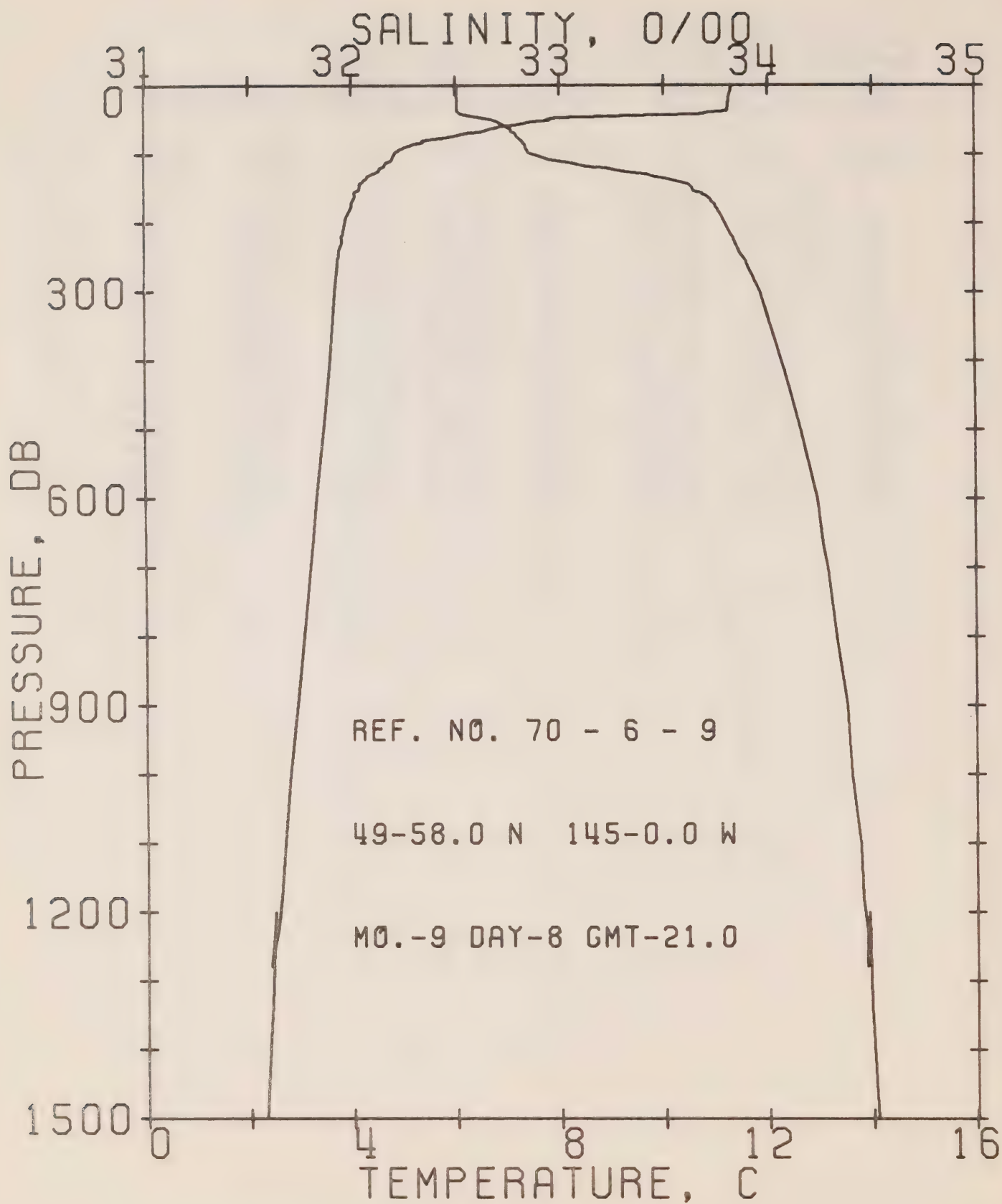
REFERENCE NO. 70- 6- 8

DATE 5/ 9/70

POSITION 49-55.0 N 144-56.0W GMT 18.8

RESULTS OF STP CAST 50 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	11.27	32.51	0	24.81	314.4	0.0	0.0	1492.
10	11.27	32.51	10	24.81	314.8	0.31	0.02	1492.
20	11.27	32.51	20	24.81	315.0	0.63	0.06	1492.
30	11.16	32.51	30	24.83	313.3	0.94	0.14	1492.
50	7.51	32.62	50	25.50	250.0	1.51	0.37	1479.
75	5.59	32.73	74	25.84	218.2	2.09	0.74	1472.
100	4.91	32.84	99	26.00	202.4	2.61	1.20	1469.
125	4.53	33.36	124	26.45	159.9	3.07	1.73	1469.
150	4.09	33.65	149	26.73	134.1	3.43	2.23	1468.
175	3.96	33.74	173	26.81	126.3	3.76	2.76	1468.
200	3.84	33.79	198	26.87	121.1	4.06	3.35	1468.
225	3.80	33.83	223	26.90	117.8	4.36	4.00	1468.
250	3.75	33.87	248	26.94	114.6	4.65	4.70	1468.
300	3.69	33.96	297	27.02	107.8	5.21	6.26	1469.





PACIFIC OCEANOGRAPHIC GROUP

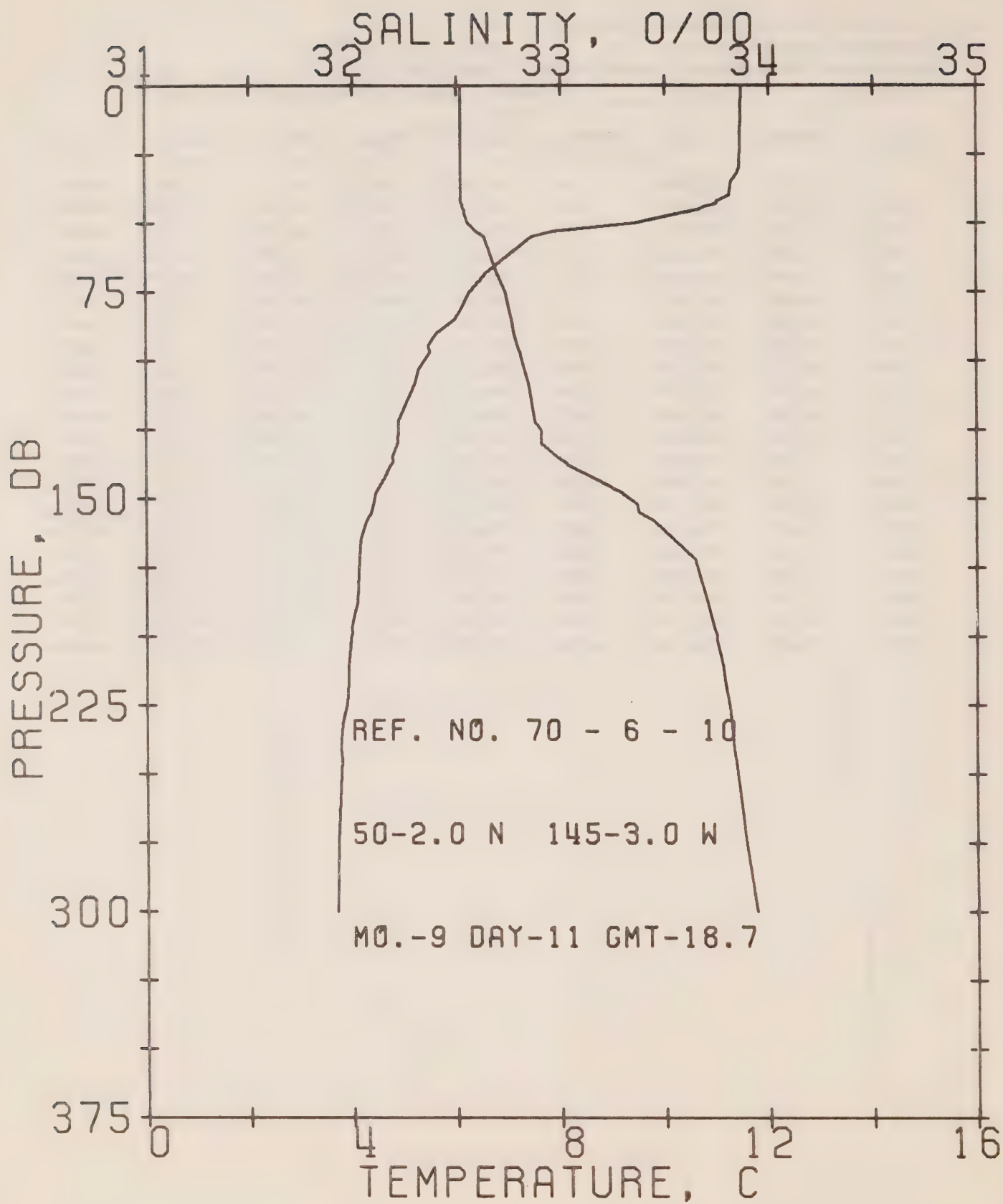
REFERENCE NO. 70- 6- 9

DATE 8/ 9/70

POSITION 49-58.0N, 145- 0.0W GMT 21.0

RESULTS OF STP CAST 67 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	11.33	32.51	0	24.80	315.4	0.0	0.0	1492.
10	11.31	32.51	10	24.81	315.5	0.32	0.02	1492.
20	11.28	32.51	20	24.81	315.1	0.63	0.06	1492.
30	11.27	32.51	30	24.81	315.2	0.95	0.14	1492.
50	7.79	32.68	50	25.51	249.3	1.54	0.38	1480.
75	5.92	32.81	75	25.86	216.3	2.11	0.75	1473.
100	4.87	32.88	99	26.04	199.3	2.63	1.21	1469.
125	4.54	33.31	124	26.41	163.8	3.09	1.73	1469.
150	4.18	33.65	149	26.72	135.1	3.45	2.24	1468.
175	4.03	33.76	174	26.82	125.6	3.77	2.77	1468.
200	3.90	33.80	199	26.87	120.8	4.08	3.36	1468.
225	3.83	33.85	223	26.91	117.1	4.38	4.01	1468.
250	3.78	33.89	248	26.95	113.5	4.67	4.70	1469.
300	3.69	33.97	298	27.02	107.0	5.22	6.25	1469.
400	3.60	34.07	397	27.11	99.4	6.25	9.91	1470.
500	3.47	34.16	496	27.20	92.1	7.21	14.29	1472.
600	3.32	34.24	595	27.27	85.3	8.10	19.25	1473.
800	3.07	34.33	793	27.37	77.3	9.72	30.81	1475.
1000	2.79	34.40	990	27.45	70.4	11.19	44.22	1477.
1200	2.48	34.48	1188	27.54	62.2	12.53	59.26	1479.
1500	2.28	34.52	1484	27.59	58.5	14.37	84.46	1484.



PACIFIC OCEANOGRAPHIC GROUP

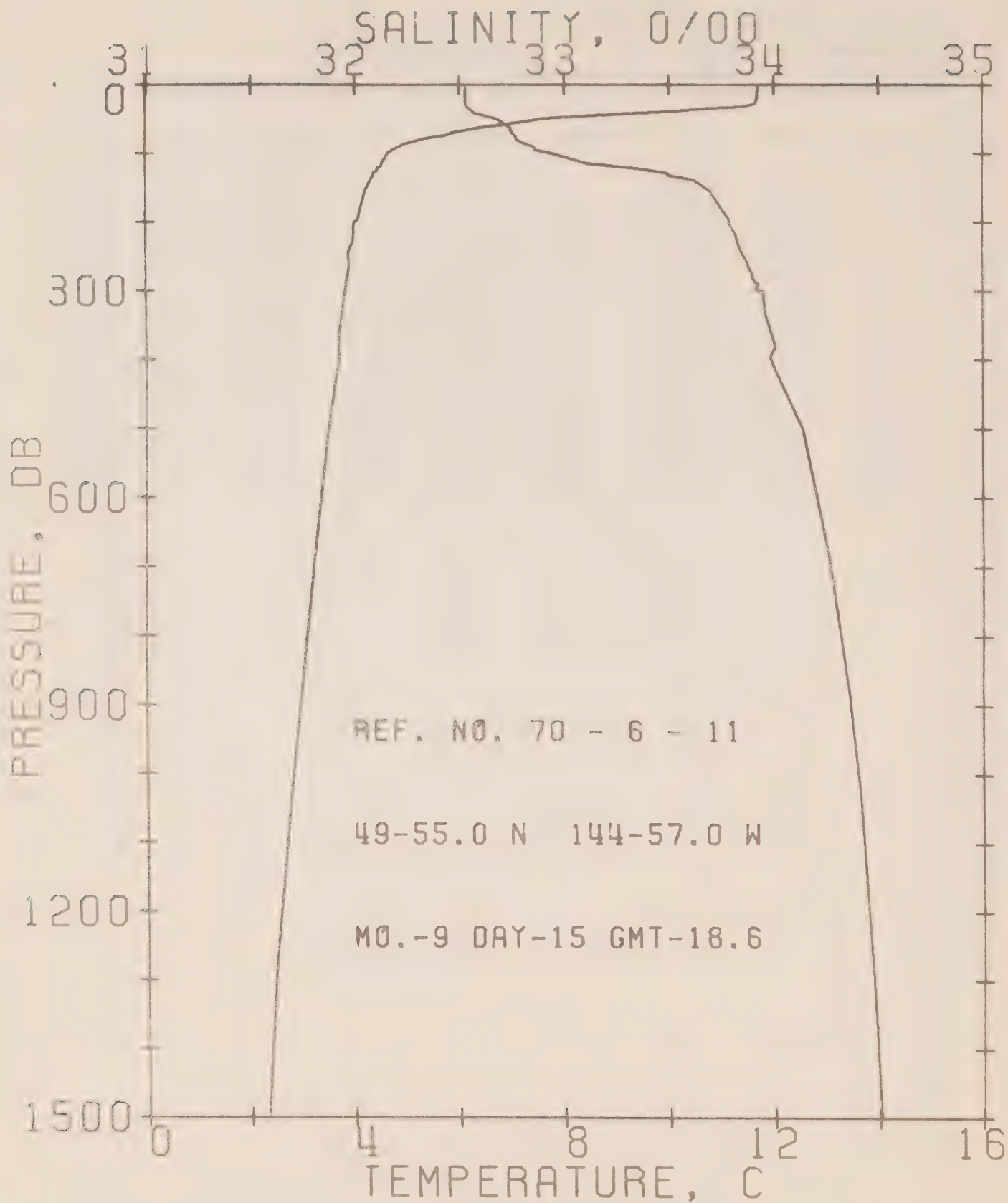
REFERENCE NO. 70- 6- 10

DATE 11/ 9/70

POSITION 50- 2.0N. 145- 3.0W GMT 18.7

RESULTS OF STP CAST 48 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	11.49	32.52	0	24.78	317.4	0.0	0.0	1493.
10	11.48	32.52	10	24.79	317.6	0.32	0.02	1493.
20	11.46	32.52	20	24.79	317.6	0.64	0.06	1493.
30	11.45	32.52	30	24.79	317.5	0.95	0.15	1493.
50	9.44	32.56	50	25.16	282.2	1.57	0.40	1486.
75	6.28	32.74	75	25.76	225.6	2.17	0.78	1474.
100	5.40	32.82	99	25.93	209.6	2.72	1.26	1471.
125	4.90	32.91	124	26.06	197.7	3.23	1.85	1470.
150	4.43	33.33	149	26.44	161.0	3.69	2.49	1469.
175	4.13	33.66	174	26.73	133.6	4.05	3.09	1468.
200	3.97	33.75	199	26.82	125.7	4.38	3.71	1468.
225	3.88	33.81	223	26.88	120.4	4.68	4.37	1468.
250	3.76	33.85	248	26.92	116.5	4.98	5.09	1468.
300	3.67	33.94	298	27.00	109.1	5.54	6.67	1469.



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 6- 11

DATE 15/ 9/70

POSITION 49-55.0N, 144-57.0W

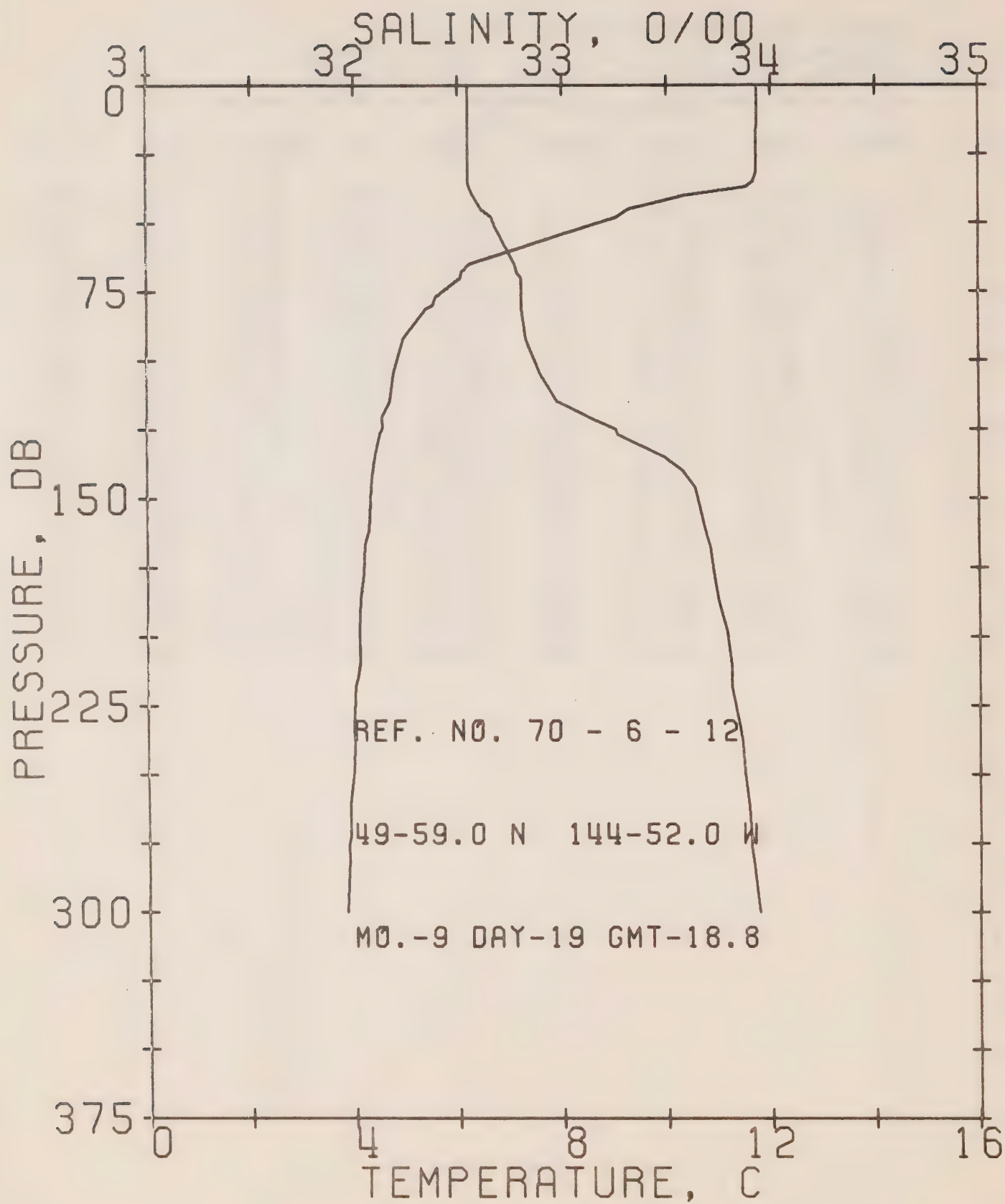
GMT 18.6

RESULTS OF STP CAST

55 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	11.72	32.53	0	24.75	320.7	0.0	0.0	1493.
10	11.71	32.53	10	24.75	320.9	0.32	0.02	1494.
20	11.70	32.53	20	24.75	321.0	0.64	0.07	1494.
30	11.53	32.53	30	24.79	317.9	0.96	0.15	1493.
50	7.56	32.69	50	25.55	245.7	1.53	0.38	1479.
75	5.63	32.77	75	25.87	215.4	2.10	0.74	1472.
100	4.67	32.95	99	26.11	192.0	2.61	1.19	1469.
125	4.45	33.42	124	26.51	154.6	3.05	1.70	1469.
150	4.26	33.68	149	26.73	133.7	3.41	2.19	1469.
175	4.16	33.74	174	26.80	127.7	3.73	2.73	1469.
200	4.01	33.79	199	26.85	123.0	4.05	3.33	1469.
225	3.99	33.83	223	26.88	120.2	4.35	3.99	1469.
250	3.89	33.86	248	26.92	116.8	4.65	4.70	1469.
300	3.84	33.95	298	26.99	110.1	5.22	6.30	1470.
400	3.71	33.99	397	27.04	106.7	6.29	10.13	1471.
500	3.50	34.14	496	27.18	93.9	7.30	14.70	1472.
600	3.37	34.21	595	27.24	88.3	8.21	19.79	1473.
800	3.10	34.32	793	27.36	78.4	9.87	31.59	1475.
1000	2.80	34.40	990	27.45	70.4	11.35	45.17	1477.
1200	2.56	34.45	1188	27.51	65.2	12.71	60.31	1480.
1500	2.29	34.51	1484	27.58	59.4	14.57	85.87	1484.





PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 6- 12

DATE 19/ 9/70

POSITION 49-59.0N, 144-52.0W

GMT 18.8

RESULTS OF STP CAST

39 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	11.76	32.55	0	24.76	319.9	0.0	0.0	1494.
10	11.76	32.55	10	24.76	320.3	0.32	0.02	1494.
20	11.75	32.55	20	24.76	320.4	0.64	0.07	1494.
30	11.75	32.55	30	24.76	320.6	0.96	0.15	1494.
50	8.72	32.68	50	25.37	262.5	1.55	0.39	1483.
75	5.74	32.81	75	25.88	213.9	2.14	0.75	1472.
100	4.85	32.87	99	26.03	199.6	2.65	1.21	1469.
125	4.56	33.26	124	26.37	167.8	3.12	1.75	1469.
150	4.33	33.65	149	26.71	136.1	3.49	2.27	1469.
175	4.20	33.72	174	26.78	129.6	3.83	2.82	1469.
200	4.09	33.79	199	26.84	123.5	4.14	3.42	1469.
225	4.00	33.83	223	26.88	120.1	4.45	4.08	1469.
250	3.96	33.87	248	26.92	116.8	4.74	4.80	1469.
300	3.81	33.94	298	26.99	110.5	5.31	6.39	1470.



RESULTS OF STD CASTS  
(P-70-7)

PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 7- 1

DATE 19/ 9/70

POSITION 48-33.0N, 125-32.0W GMT 0.0

RESULTS OF STP CAST 28 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	10.40	31.93	0	24.52	342.8	0.0	0.0	1488.
10	9.61	32.31	10	24.94	302.6	0.33	0.02	1486.
20	9.08	32.43	20	25.12	285.8	0.62	0.06	1484.
30	8.78	32.63	30	25.32	266.7	0.90	0.13	1483.
50	8.54	32.99	50	25.64	236.8	1.42	0.34	1483.
75	6.88	33.59	75	26.35	169.4	1.91	0.65	1478.
100	6.57	33.76	99	26.53	153.0	2.31	1.01	1477.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	10.40	31.93	47.	8.78	32.93
4.	9.85	31.93	52.	8.38	33.03
5.	9.99	31.95	56.	7.88	33.13
7.	9.47	32.03	60.	7.58	33.31
8.	9.58	32.27	63.	7.28	33.40
14.	9.67	32.39	67.	7.22	33.49
17.	9.28	32.40	68.	7.10	33.51
20.	9.08	32.43	72.	7.05	33.55
24.	8.98	32.45	76.	6.83	33.61
27.	8.93	32.49	81.	6.78	33.65
30.	8.78	32.63	86.	6.68	33.70
32.	8.63	32.59	91.	6.68	33.73
42.	8.55	32.67	98.	6.58	33.76
44.	8.58	32.73	110.	6.52	33.79



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 7- 2

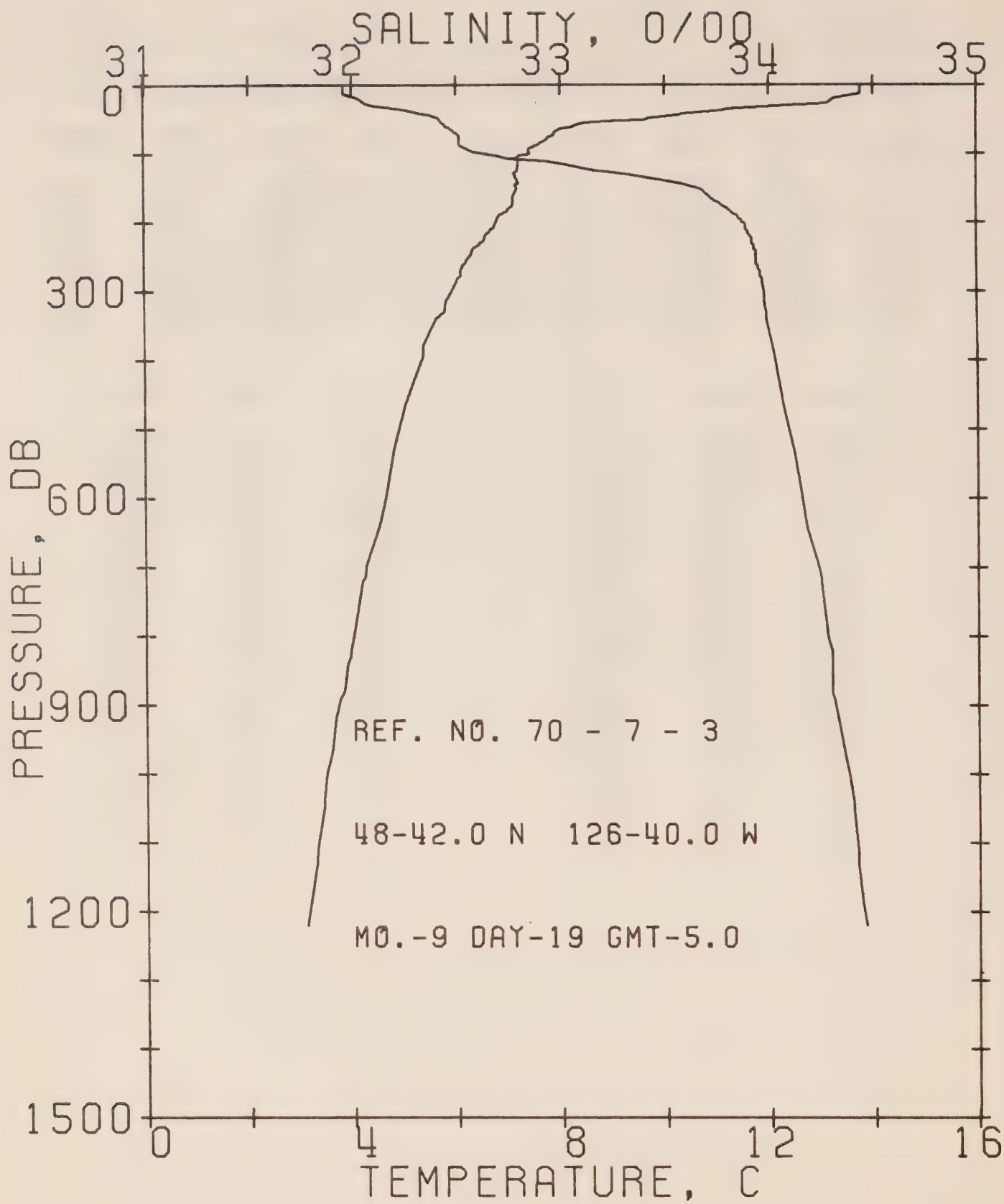
DATE 19/ 9/70

POSITION 48-38.0N, 126- 0.0W GMT 2.5

RESULTS OF STP CAST 37 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	12.85	32.13	0	24.23	370.5	0.0	0.0	1497.
10	12.34	32.14	10	24.33	360.9	0.37	0.02	1495.
20	11.39	32.26	20	24.60	335.2	0.72	0.07	1492.
30	8.51	32.47	30	25.24	274.4	1.02	0.15	1482.
50	7.77	32.85	50	25.64	236.6	1.52	0.35	1480.
75	6.92	32.71	75	25.66	235.6	2.08	0.71	1477.
100	6.85	33.61	99	26.37	167.9	2.54	1.12	1478.

PRESS	TEMP	SAL	PRESS	TEMP	SAL
0.	12.85	32.13	55.	7.61	32.91
8.	12.85	32.13	57.	7.54	32.95
9.	12.75	32.13	61.	7.26	33.03
10.	12.34	32.14	63.	7.23	33.05
15.	11.87	32.18	64.	7.13	33.07
17.	11.59	32.23	68.	6.98	33.13
19.	11.56	32.25	74.	6.96	32.20
21.	11.23	32.28	76.	6.89	33.23
22.	10.51	32.33	79.	6.89	33.32
25.	9.54	32.44	82.	6.83	33.35
28.	8.63	32.46	85.	6.72	33.39
31.	8.45	32.48	88.	6.72	33.45
33.	7.93	32.52	89.	6.79	33.47
38.	7.70	32.66	90.	6.79	33.49
39.	7.76	32.69	91.	6.89	33.51
41.	7.83	32.73	96.	6.90	33.57
45.	7.83	32.78	97.	6.90	33.59
51.	7.76	32.86	102.	6.81	33.63
53.	7.63	32.89			



PACIFIC OCEANOGRAPHIC GROUP

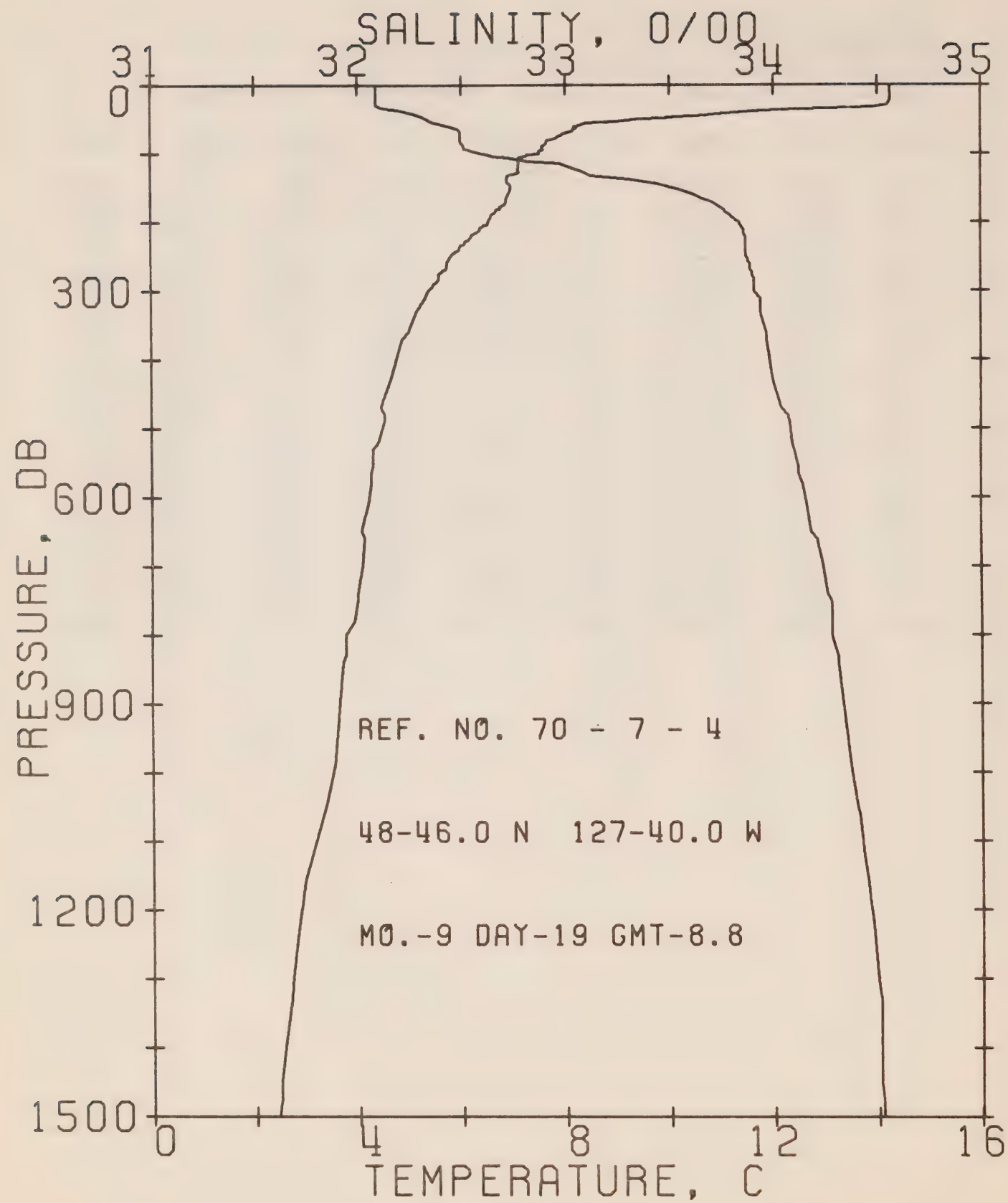
REFERENCE NO. 70- 7- 3

DATE 19/ 9/70

POSITION 48-42.0N, 126-40.0W GMT 5.0

RESULTS OF STP CAST 113 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	13.77	31.96	0	23.91	400.4	0.0	0.0	1500.
10	13.77	31.96	10	23.91	400.8	0.40	0.02	1500.
20	13.27	32.04	20	24.07	385.6	0.80	0.08	1498.
30	12.38	32.10	30	24.29	365.0	1.18	0.18	1496.
50	9.66	32.43	50	25.02	295.5	1.82	0.44	1487.
75	7.84	32.52	75	25.38	262.2	2.50	0.87	1480.
100	7.43	32.63	99	25.52	248.7	3.15	1.44	1479.
125	7.20	33.17	124	25.98	205.9	3.71	2.09	1479.
150	7.16	33.65	149	26.36	169.7	4.17	2.73	1480.
175	7.11	33.78	174	26.46	160.3	4.58	3.41	1481.
200	6.79	33.88	199	26.59	148.9	4.97	4.15	1480.
225	6.56	33.92	224	26.65	143.1	5.33	4.94	1480.
250	6.27	33.94	248	26.70	138.2	5.68	5.79	1479.
300	5.93	33.98	298	26.78	131.6	6.36	7.67	1478.
400	5.35	34.03	397	26.89	121.7	7.62	12.18	1478.
500	4.91	34.10	496	26.99	112.7	8.79	17.54	1478.
600	4.64	34.16	595	27.07	105.9	9.88	23.64	1478.
800	4.02	34.28	793	27.24	91.6	11.84	37.54	1479.
1000	3.47	34.38	991	27.37	79.4	13.56	53.27	1480.
1200	3.12	34.45	1188	27.46	71.6	15.07	70.22	1482.



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 7- 4

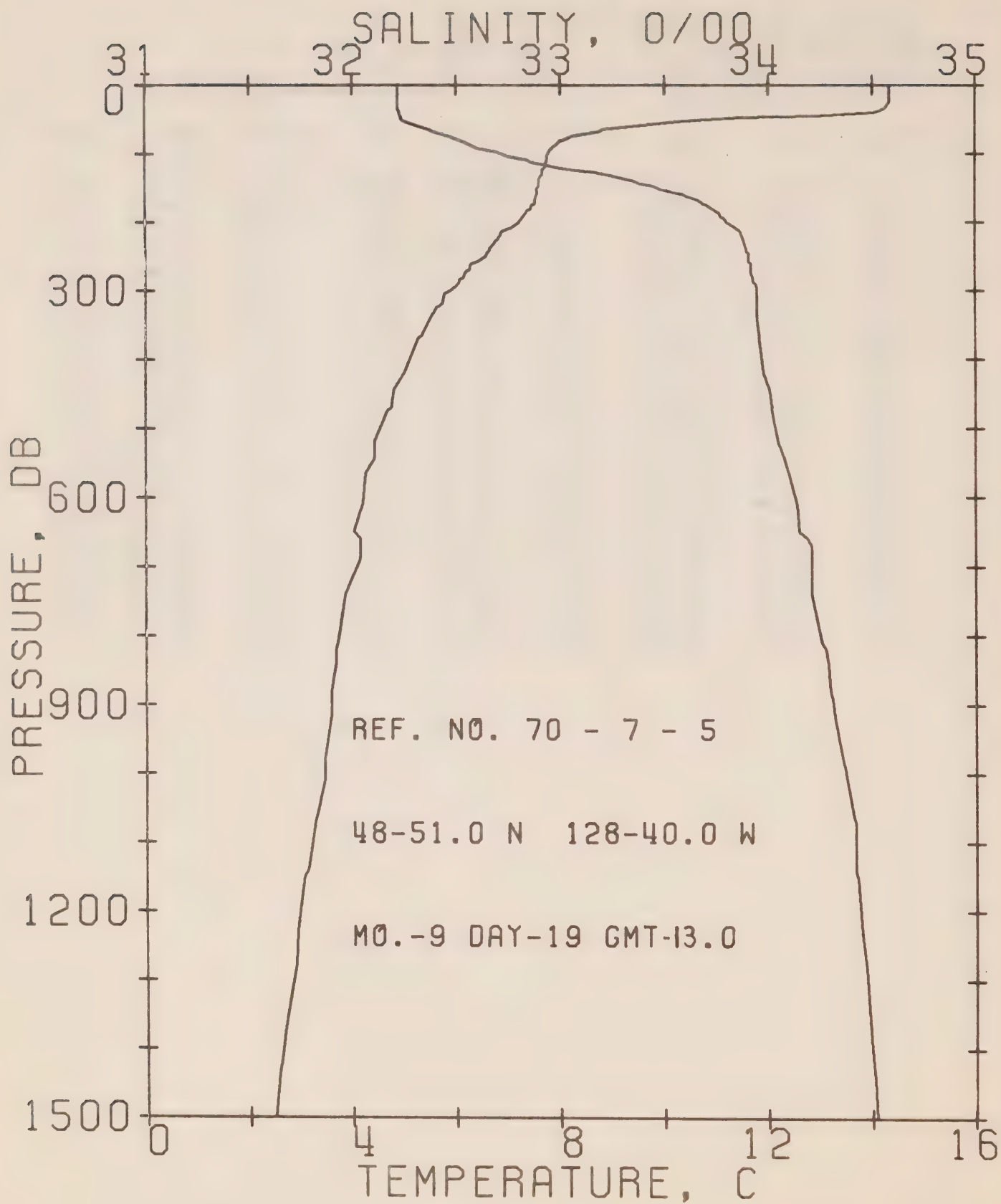
DATE 19/ 9/70

POSITION 48-46.0N. 127-40.0W GMT 8.8

RESULTS OF STP CAST 129 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	14.25	32.09	0	23.91	400.2	0.0	0.0	1501.
10	14.25	32.09	10	23.91	400.8	0.40	0.02	1502.
20	14.26	32.09	20	23.91	401.1	0.80	0.08	1502.
30	14.12	32.10	30	23.95	398.1	1.20	0.18	1501.
50	9.34	32.34	50	25.01	296.7	1.88	0.46	1485.
75	7.88	32.50	75	25.35	264.3	2.57	0.89	1480.
100	7.52	32.61	99	25.49	251.5	3.22	1.47	1480.
125	7.11	33.08	124	25.92	211.4	3.79	2.12	1479.
150	6.97	33.52	149	26.29	176.9	4.27	2.80	1479.
175	6.84	33.73	174	26.47	159.8	4.69	3.49	1480.
200	6.55	33.84	199	26.59	148.6	5.07	4.22	1479.
225	6.18	33.87	224	26.66	141.9	5.43	5.01	1478.
250	5.82	33.87	248	26.71	137.4	5.78	5.85	1477.
300	5.39	33.91	298	26.79	130.2	6.45	7.72	1476.
400	4.76	33.98	397	26.92	118.3	7.68	12.11	1475.
500	4.49	34.08	496	27.03	108.9	8.82	17.32	1476.
600	4.24	34.15	595	27.11	101.7	9.87	23.20	1477.
800	3.76	34.28	793	27.26	88.6	11.77	36.69	1478.
1000	3.50	34.37	991	27.36	80.1	13.45	52.07	1480.
1200	2.87	34.46	1188	27.49	67.6	14.92	68.52	1481.
1500	2.41	34.52	1484	27.58	60.0	16.82	94.54	1484.





PACIFIC OCEANOGRAPHIC GROUP

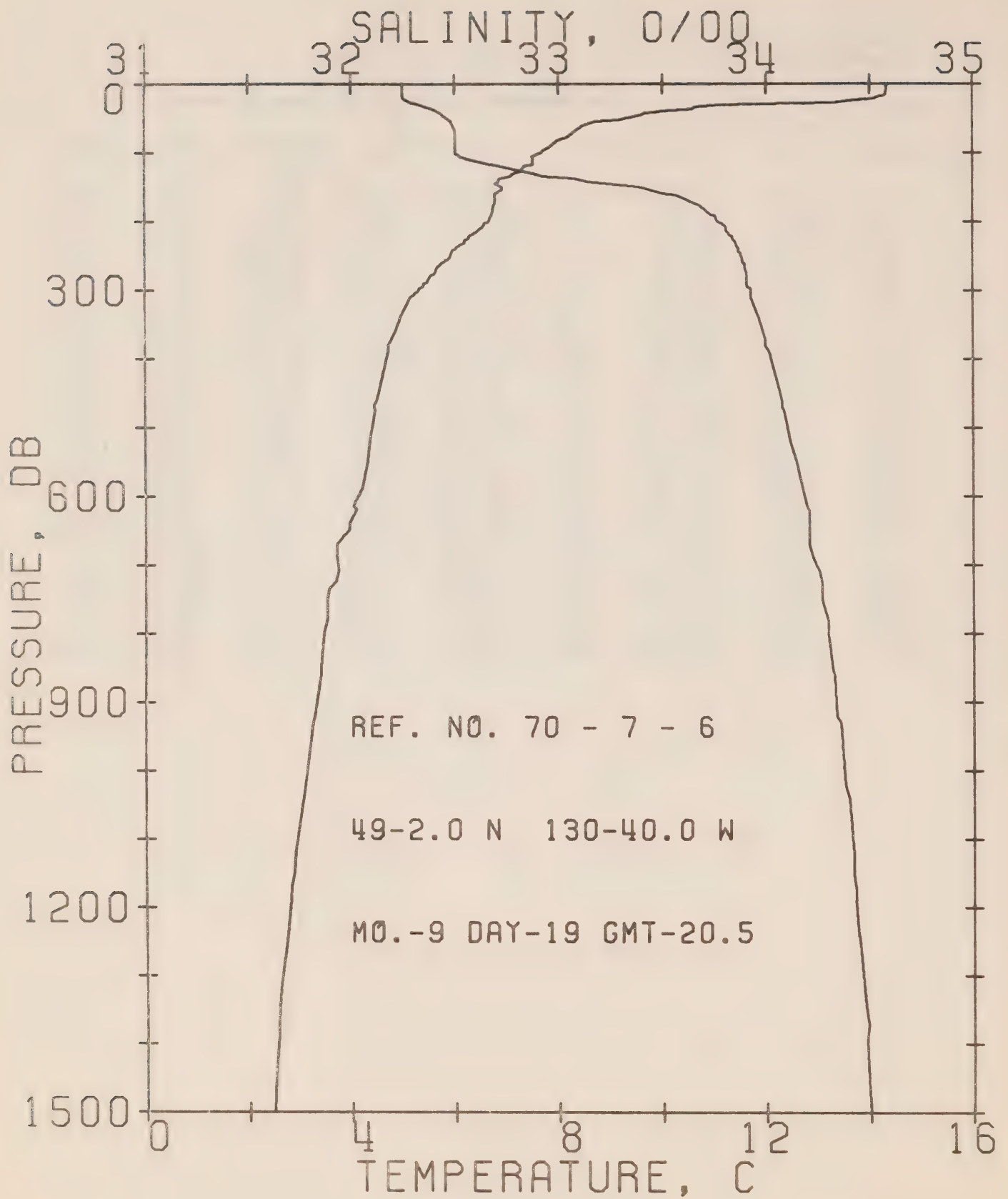
REFERENCE NO. 70- 7- 5

DATE 19/ 9/70

POSITION 48-51.0N, 128-40.0W GMT13.0.0

RESULTS OF STP CAST 105 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	14.34	32.22	0	24.00	392.5	0.0	0.0	1502.
10	14.34	32.22	10	24.00	392.9	0.39	0.02	1502.
20	14.34	32.22	20	24.00	393.2	0.79	0.08	1502.
30	14.32	32.22	30	24.00	393.0	1.18	0.18	1502.
50	11.05	32.24	50	24.65	331.5	1.93	0.49	1491.
75	8.25	32.47	75	25.28	271.7	2.68	0.96	1482.
100	7.80	32.72	99	25.54	247.4	3.33	1.53	1481.
125	7.68	33.08	124	25.84	219.2	3.92	2.21	1481.
150	7.59	33.46	149	26.15	189.8	4.42	2.92	1482.
175	7.50	33.70	174	26.35	171.4	4.87	3.66	1482.
200	7.25	33.80	199	26.47	160.5	5.29	4.45	1482.
225	6.83	33.88	224	26.59	149.4	5.67	5.28	1481.
250	6.60	33.91	248	26.64	144.7	6.04	6.17	1480.
300	5.92	33.95	298	26.76	133.7	6.73	8.12	1478.
400	5.13	33.97	397	26.87	123.6	8.02	12.69	1477.
500	4.55	34.04	496	26.99	113.1	9.20	18.10	1476.
600	4.23	34.13	595	27.10	103.3	10.28	24.14	1476.
800	3.74	34.25	793	27.24	90.4	12.21	37.90	1478.
1000	3.45	34.37	991	27.37	79.6	13.91	53.42	1480.
1200	2.97	34.44	1188	27.47	70.4	15.40	70.10	1481.
1500	2.47	34.52	1484	27.57	60.7	17.36	97.02	1484.



PACIFIC OCEANOGRAPHIC GROUP

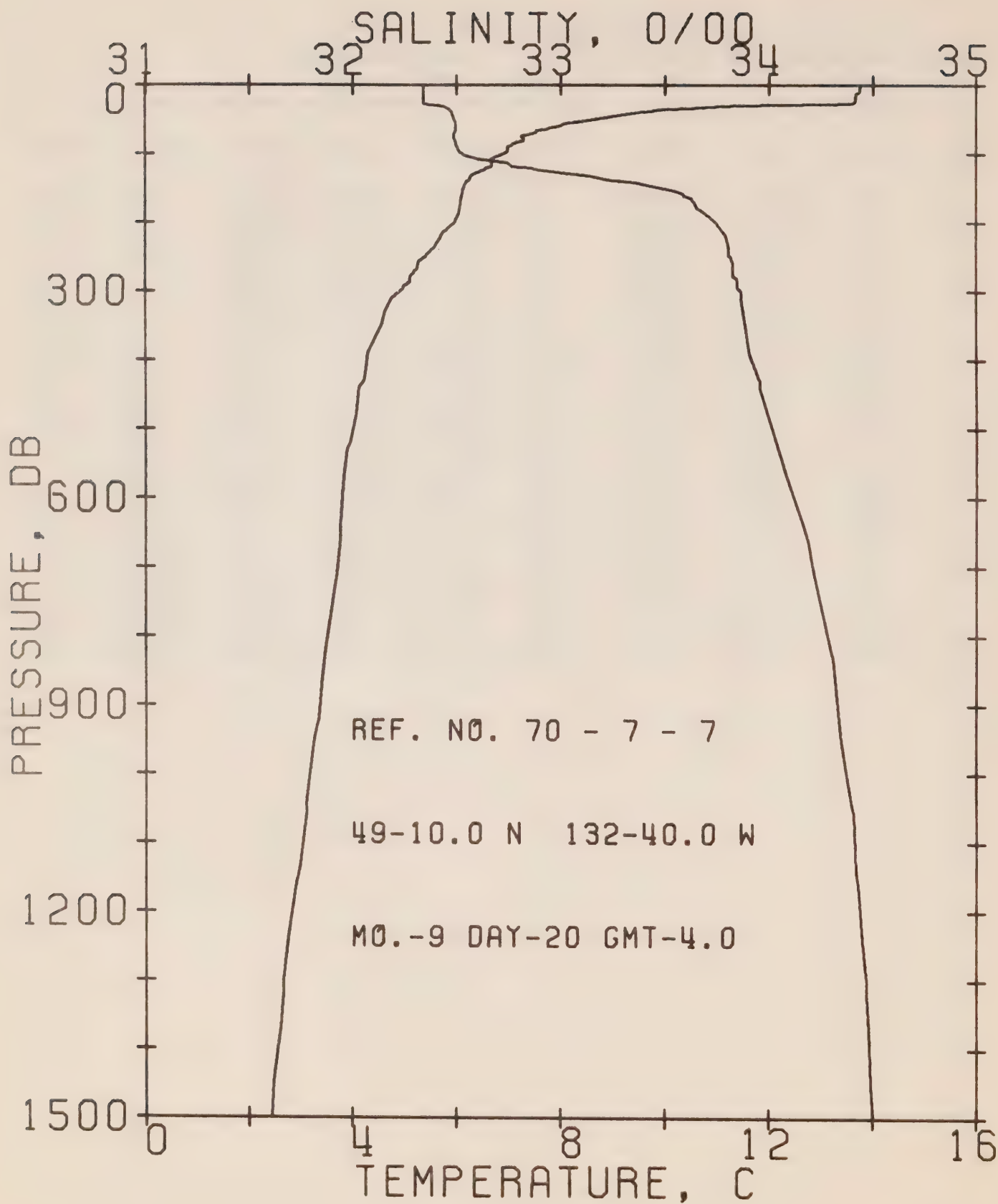
REFERENCE NO. 70- 7- 6

DATE 19/ 9/70

POSITION 49- 2.0N, 130-40.0W GMT 20.5

RESULTS OF STP CAST 114 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	14.36	32.25	0	24.01	390.6	0.0	0.0	1502.
10	14.34	32.25	10	24.02	390.8	0.39	0.02	1502.
20	14.16	32.25	20	24.06	387.2	0.78	0.08	1502.
30	11.86	32.33	30	24.56	339.1	1.15	0.17	1494.
50	9.36	32.47	50	25.10	287.8	1.76	0.42	1486.
75	8.25	32.51	75	25.31	268.8	2.45	0.86	1482.
100	7.71	32.51	99	25.39	261.6	3.11	1.45	1480.
125	7.33	32.79	124	25.66	235.8	3.74	2.17	1479.
150	6.93	33.39	149	26.19	186.3	4.27	2.91	1479.
175	6.80	33.67	174	26.42	164.1	4.71	3.63	1479.
200	6.70	33.77	199	26.52	155.7	5.10	4.39	1480.
225	6.29	33.84	224	26.63	145.4	5.48	5.20	1478.
250	5.95	33.88	248	26.70	138.3	5.83	6.05	1477.
300	5.33	33.93	298	26.81	128.0	6.50	7.92	1476.
400	4.70	34.03	397	26.96	114.4	7.70	12.20	1475.
500	4.42	34.11	496	27.06	106.4	8.80	17.24	1476.
600	4.15	34.19	595	27.15	98.2	9.83	22.99	1476.
800	3.47	34.30	793	27.31	83.9	11.64	35.83	1477.
1000	3.12	34.38	991	27.40	75.8	13.23	50.44	1479.
1200	2.78	34.43	1188	27.48	69.1	14.67	66.53	1481.
1500	2.45	34.50	1484	27.56	62.0	16.61	93.22	1484.





PACIFIC OCEANOGRAPHIC GROUP

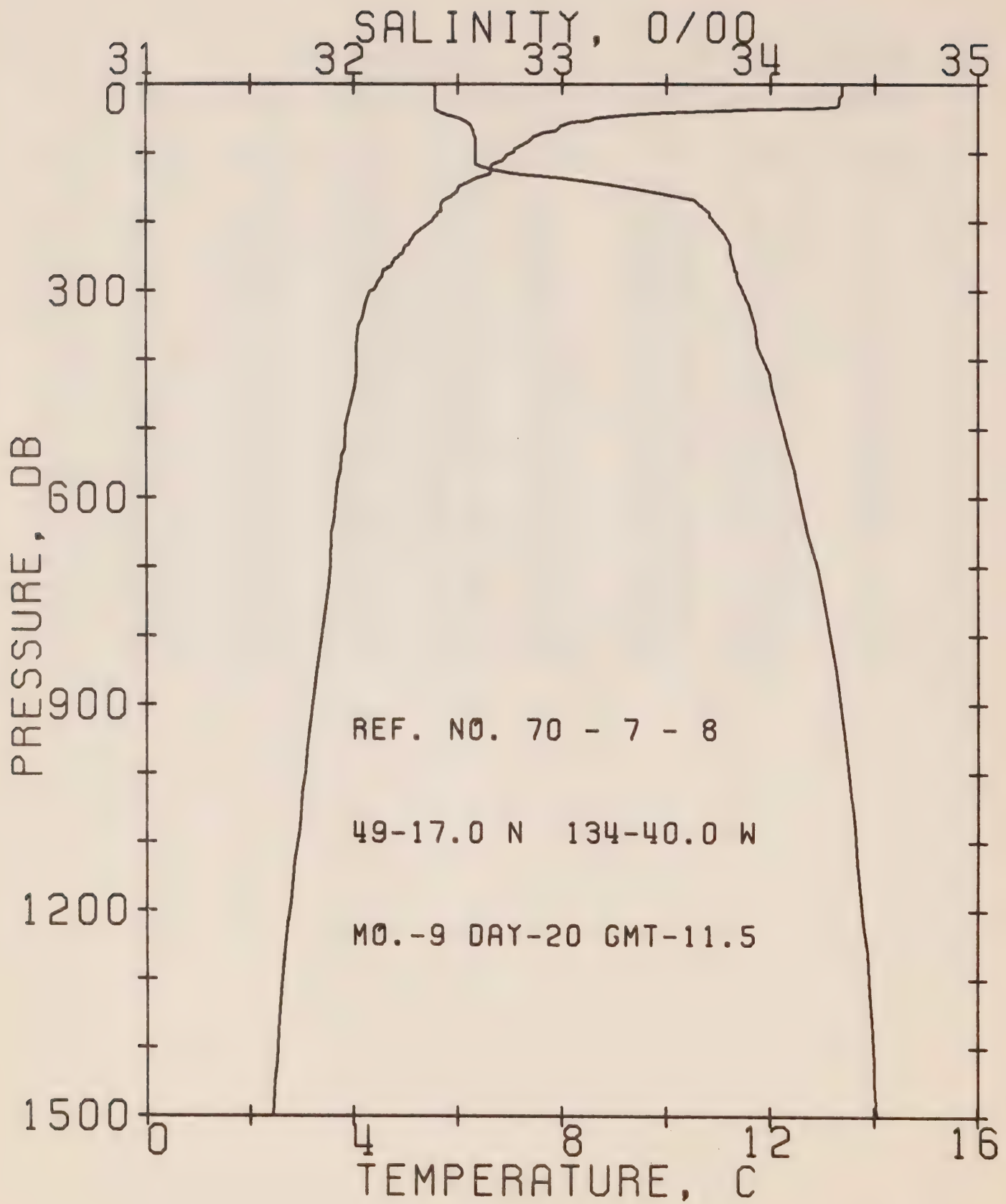
REFERENCE NO. 70- 7- 7

DATE 20/ 9/70

POSITION 49-10.0N, 132-40.0W GMT 4.0

RESULTS OF STP CAST 91 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	13.79	32.34	0	24.20	372.8	0.0	0.0	1500.
10	13.76	32.34	10	24.21	372.7	0.37	0.02	1500.
20	13.68	32.34	20	24.22	371.5	0.74	0.08	1500.
30	11.46	32.41	30	24.70	325.9	1.11	0.17	1493.
50	8.65	32.49	50	25.24	275.2	1.69	0.41	1483.
75	7.26	32.49	75	25.43	256.7	2.35	0.82	1478.
100	6.92	32.53	99	25.51	249.5	2.99	1.39	1477.
125	6.51	32.93	124	25.88	214.5	3.57	2.06	1476.
150	6.16	33.49	149	26.36	169.4	4.05	2.72	1476.
175	6.09	33.65	174	26.50	156.3	4.45	3.38	1477.
200	5.98	33.75	199	26.59	148.1	4.83	4.11	1477.
225	5.69	33.80	224	26.67	140.9	5.19	4.89	1476.
250	5.43	33.82	248	26.72	136.9	5.54	5.73	1475.
300	4.93	33.87	298	26.81	127.8	6.20	7.59	1474.
400	4.29	33.92	397	26.92	117.8	7.43	11.96	1473.
500	4.03	34.02	496	27.03	108.5	8.56	17.13	1474.
600	3.81	34.12	595	27.13	99.1	9.59	22.93	1475.
800	3.52	34.29	793	27.29	85.5	11.43	36.02	1477.
1000	3.18	34.38	991	27.40	76.4	13.05	50.82	1479.
1200	2.83	34.44	1188	27.48	69.0	14.50	67.07	1481.
1500	2.42	34.50	1484	27.56	61.6	16.45	93.80	1484.



PACIFIC OCEANOGRAPHIC GROUP

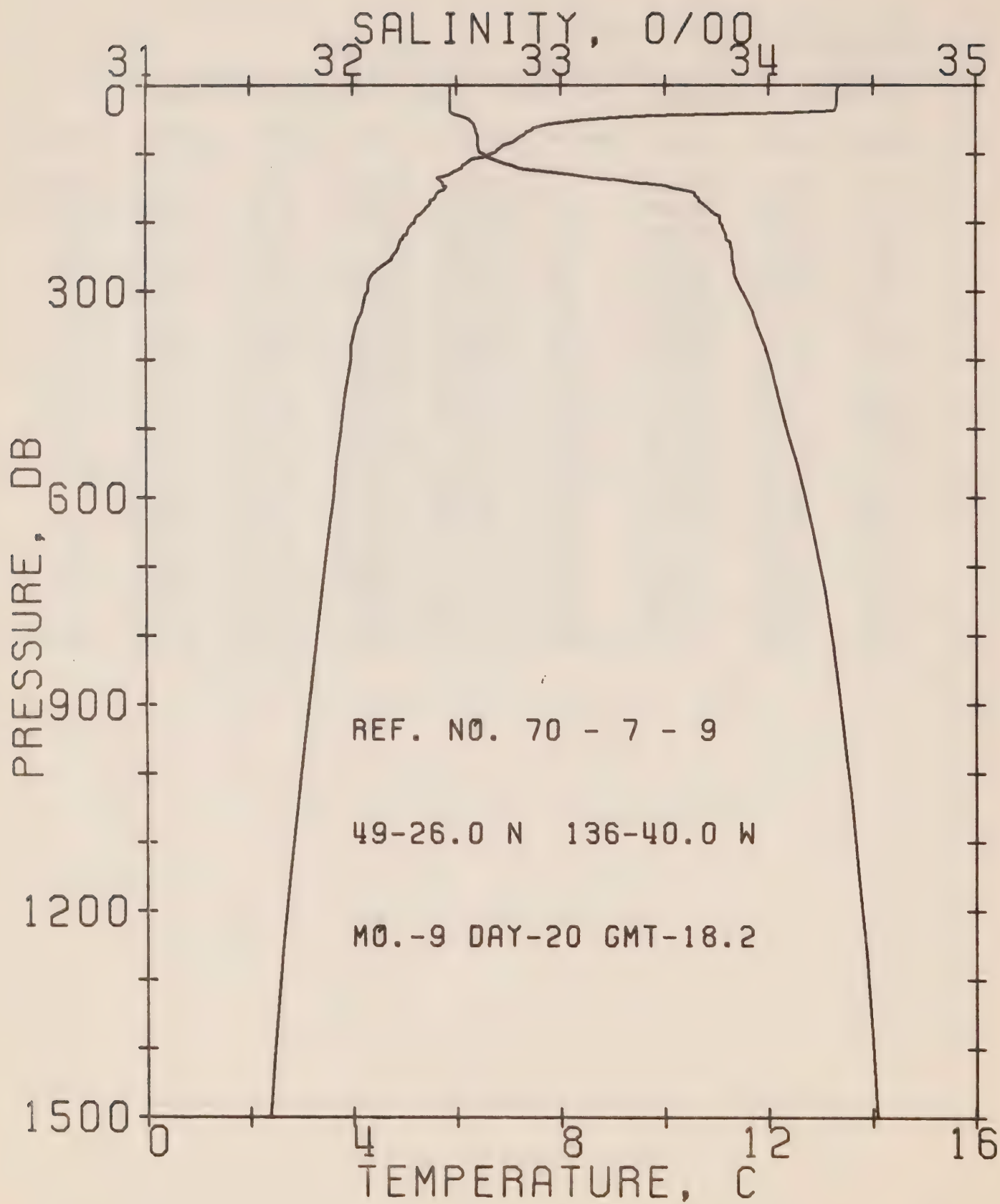
REFERENCE NO. 70- 7- 8

DATE 20/ 9/70

POSITION 49-17.0N, 134-40.0W GMT 11.5

RESULTS OF STP CAST 83 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	13.38	32.39	0	24.32	361.3	0.0	0.0	1499.
10	13.38	32.39	10	24.32	361.7	0.36	0.02	1499.
20	13.33	32.39	20	24.33	361.1	0.72	0.07	1499.
30	13.33	32.39	30	24.33	361.3	1.08	0.17	1499.
50	8.64	32.52	50	25.26	273.4	1.71	0.42	1483.
75	7.51	32.59	75	25.48	252.7	2.37	0.83	1479.
100	7.04	32.59	99	25.54	246.6	2.99	1.39	1478.
125	6.67	32.69	124	25.67	234.9	3.60	2.09	1477.
150	6.04	33.32	149	26.24	180.5	4.11	2.81	1475.
175	5.70	33.66	174	26.56	150.8	4.52	3.48	1475.
200	5.49	33.74	199	26.64	143.3	4.89	4.18	1475.
225	5.14	33.80	224	26.73	134.9	5.24	4.93	1474.
250	4.87	33.82	248	26.78	130.8	5.57	5.74	1473.
300	4.33	33.87	298	26.88	121.1	6.20	7.50	1472.
400	4.06	33.97	397	26.99	111.7	7.36	11.62	1472.
500	3.86	34.06	496	27.08	103.3	8.43	16.55	1473.
600	3.67	34.14	595	27.16	96.1	9.43	22.13	1474.
800	3.39	34.29	793	27.31	83.7	11.22	34.88	1476.
1000	3.07	34.38	991	27.41	74.9	12.80	49.31	1478.
1200	2.77	34.44	1188	27.49	68.1	14.23	65.29	1481.
1500	2.42	34.51	1484	27.57	60.9	16.14	91.55	1484.



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 7- 9

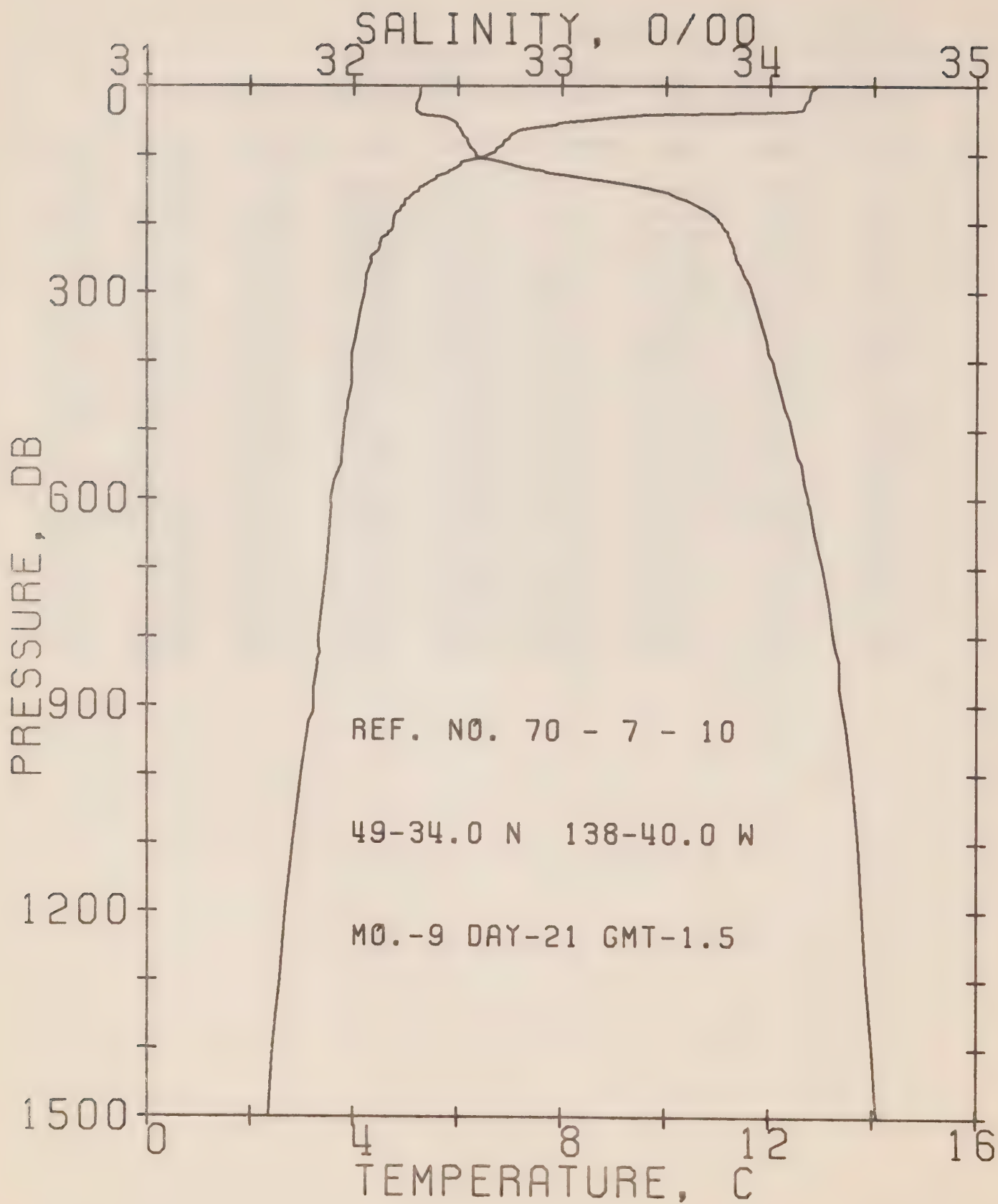
DATE 20/ 9/70

POSITION 49-26.0N, 136-40.0W GMT 18.2

RESULTS OF STP CAST 78 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	13.37	32.47	0	24.39	355.2	0.0	0.0	1499.
10	13.33	32.47	10	24.39	354.9	0.36	0.02	1499.
20	13.33	32.47	20	24.39	355.2	0.71	0.07	1499.
30	13.33	32.47	30	24.39	355.4	1.07	0.16	1499.
50	8.48	32.57	50	25.32	267.1	1.71	0.42	1482.
75	7.25	32.61	75	25.53	247.7	2.34	0.82	1478.
100	6.67	32.64	99	25.63	238.2	2.95	1.37	1476.
125	5.98	32.93	124	25.95	208.4	3.52	2.02	1474.
150	5.82	33.55	149	26.45	160.5	3.97	2.65	1475.
175	5.49	33.70	174	26.61	145.6	4.35	3.27	1474.
200	5.21	33.77	199	26.70	137.4	4.70	3.94	1473.
225	4.97	33.80	223	26.76	132.4	5.04	4.67	1473.
250	4.79	33.83	248	26.80	128.7	5.36	5.46	1473.
300	4.32	33.88	298	26.89	120.3	5.98	7.20	1472.
400	3.99	34.01	397	27.03	108.0	7.12	11.22	1472.
500	3.79	34.09	496	27.11	100.6	8.16	16.00	1473.
600	3.64	34.18	595	27.20	93.1	9.12	21.40	1474.
800	3.31	34.30	793	27.33	81.8	10.86	33.77	1476.
1000	2.99	34.38	990	27.42	73.7	12.42	47.98	1478.
1200	2.71	34.45	1188	27.50	67.0	13.82	63.70	1480.
1500	2.36	34.52	1484	27.58	59.5	15.71	89.58	1484.





PACIFIC OCEANOGRAPHIC GROUP

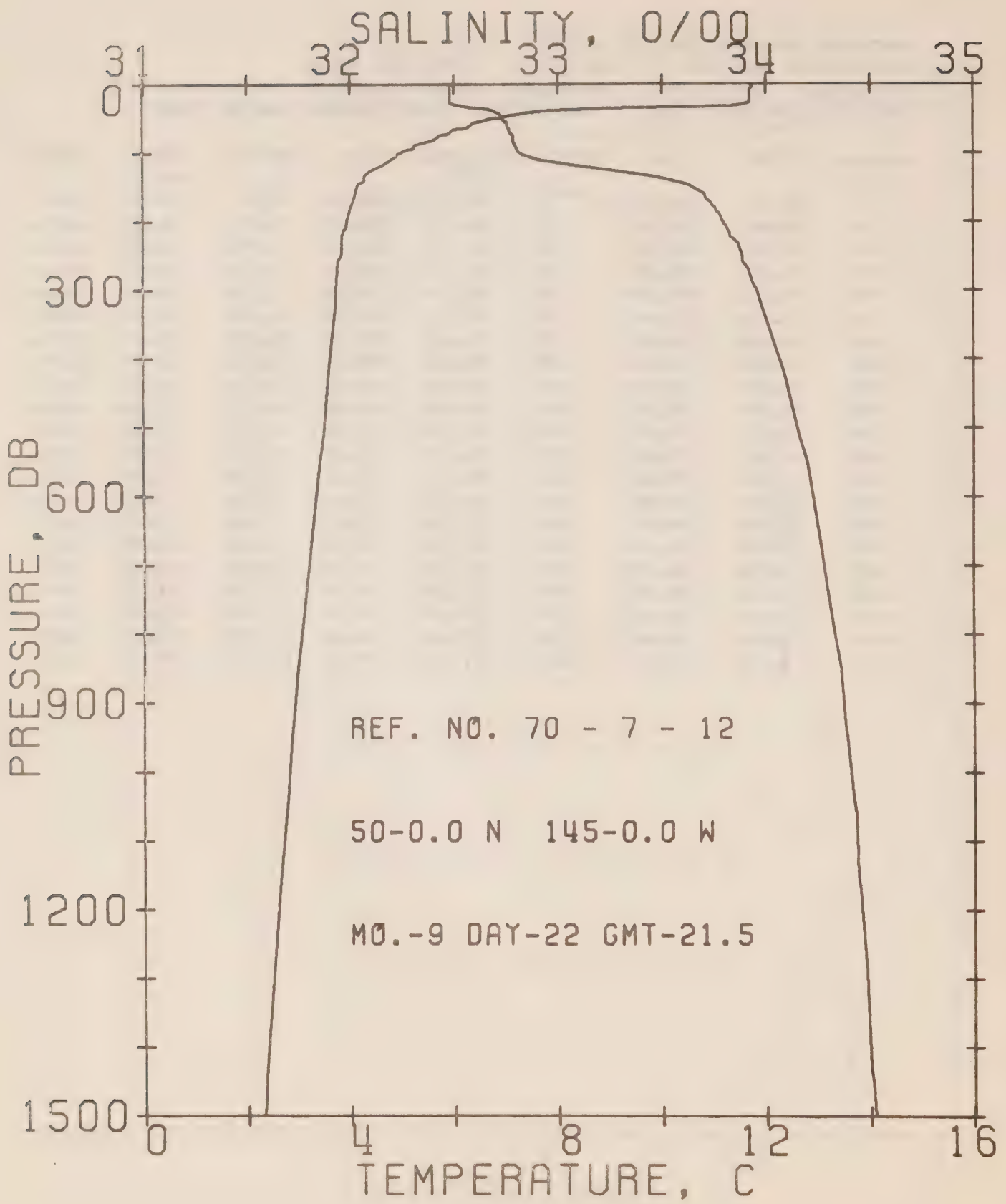
REFERENCE NO. 70- 7- 10

DATE 21/ 9/70

POSITION 49-34.0N. 138-40.0W GMT 1.5

RESULTS OF STP CAST 96 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	12.90	32.32	0	24.36	357.4	0.0	0.0	1497.
10	12.80	32.32	10	24.38	356.2	0.36	0.02	1497.
20	12.77	32.31	20	24.38	356.4	0.71	0.07	1497.
30	12.68	32.30	30	24.39	355.8	1.07	0.16	1497.
50	8.53	32.48	50	25.24	274.6	1.71	0.42	1482.
75	7.02	32.54	75	25.51	249.5	2.36	0.83	1477.
100	6.59	32.59	99	25.60	241.0	2.97	1.38	1476.
125	5.84	32.92	124	25.96	207.2	3.53	2.02	1474.
150	5.28	33.44	149	26.43	162.6	3.99	2.66	1473.
175	4.94	33.66	174	26.65	142.4	4.37	3.29	1472.
200	4.78	33.77	199	26.75	132.6	4.71	3.94	1472.
225	4.53	33.81	223	26.81	126.8	5.04	4.64	1471.
250	4.33	33.84	248	26.85	123.0	5.35	5.40	1471.
300	4.23	33.92	298	26.93	116.4	5.95	7.07	1471.
400	3.97	34.02	397	27.04	107.0	7.06	11.05	1472.
500	3.92	34.11	496	27.12	99.5	8.10	15.79	1473.
600	3.56	34.19	595	27.21	91.6	9.06	21.15	1474.
800	3.32	34.31	793	27.33	81.5	10.78	33.45	1476.
1000	2.99	34.40	990	27.43	72.6	12.33	47.58	1478.
1200	2.68	34.45	1188	27.50	66.6	13.72	63.11	1480.
1500	2.34	34.52	1484	27.58	59.2	15.60	88.99	1484.



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 7- 12

DATE 22/ 9/70

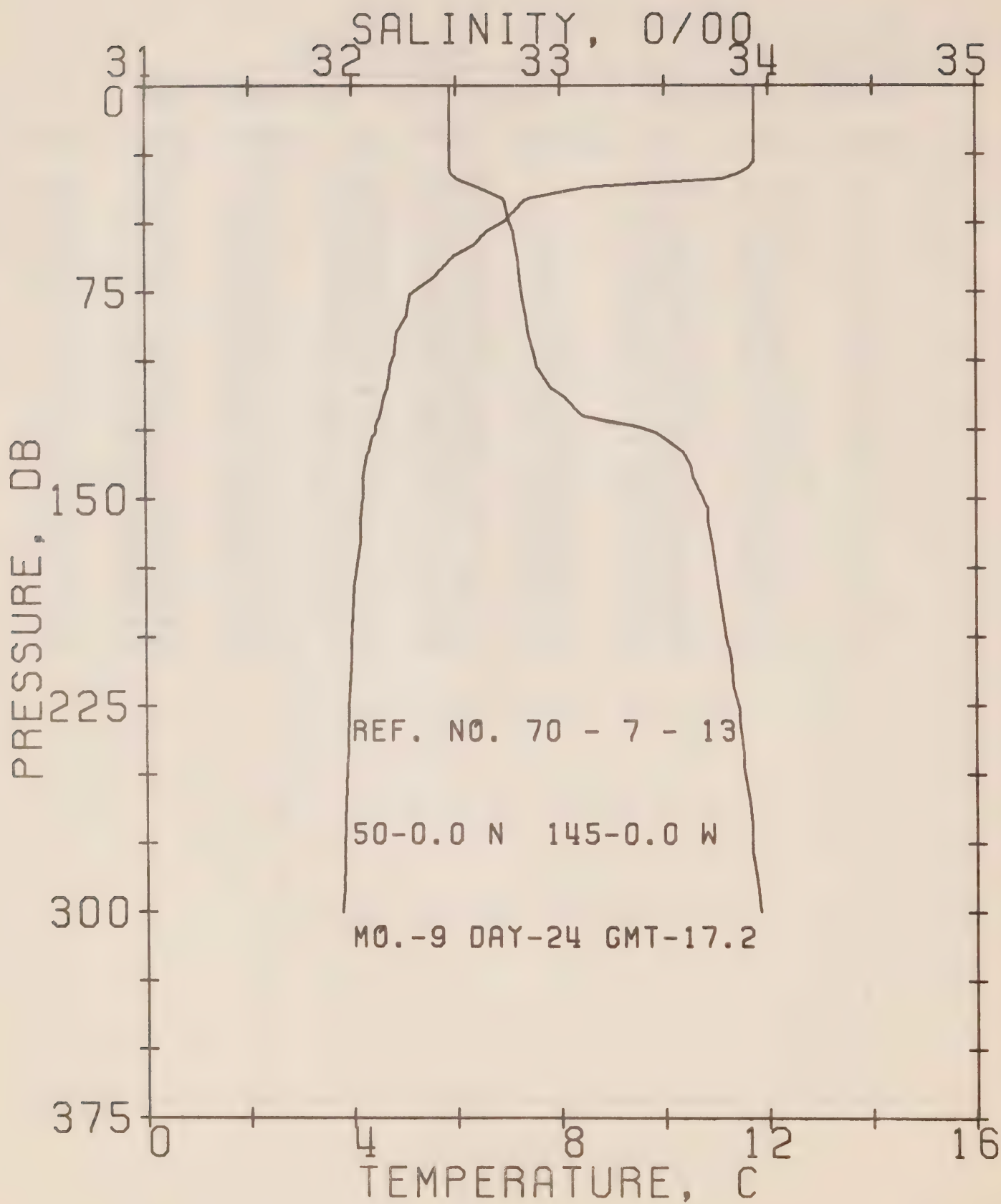
POSITION 50- 0.0N, 145- 0.0W

GMT 21.5

RESULTS OF STP CAST

72 POINTS TAKEN FROM ANALOG TRACE

DEPTH	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	11.75	32.48	0	24.70	324.8	0.0	0.0	1493.
10	11.71	32.48	10	24.71	324.6	0.32	0.02	1493.
20	11.71	32.48	20	24.71	324.9	0.65	0.07	1494.
30	11.53	32.51	30	24.77	319.7	0.97	0.15	1493.
50	6.73	32.74	50	25.70	230.9	1.49	0.36	1476.
75	5.76	32.79	75	25.86	215.7	2.05	0.71	1472.
100	4.99	32.82	99	25.98	204.8	2.57	1.18	1470.
125	4.45	33.25	124	26.37	167.4	3.05	1.72	1468.
150	4.16	33.65	149	26.72	134.3	3.42	2.24	1468.
175	4.05	33.74	174	26.81	126.6	3.74	2.78	1468.
200	3.96	33.80	199	26.86	121.9	4.05	3.37	1468.
225	3.86	33.84	223	26.91	117.5	4.35	4.02	1468.
250	3.84	33.89	248	26.95	114.1	4.64	4.71	1469.
300	3.73	33.96	298	27.01	108.2	5.20	6.27	1469.
400	3.62	34.07	397	27.11	99.7	6.24	9.97	1471.
500	3.50	34.15	496	27.19	93.0	7.20	14.37	1472.
600	3.35	34.23	595	27.26	86.5	8.09	19.38	1473.
800	3.05	34.33	793	27.37	77.0	9.73	30.99	1475.
1000	2.81	34.41	990	27.45	70.1	11.19	44.39	1477.
1200	2.58	34.46	1188	27.51	65.0	12.54	59.50	1480.
1500	2.29	34.52	1484	27.59	58.7	14.39	84.95	1484.





PACIFIC OCEANOGRAPHIC GROUP

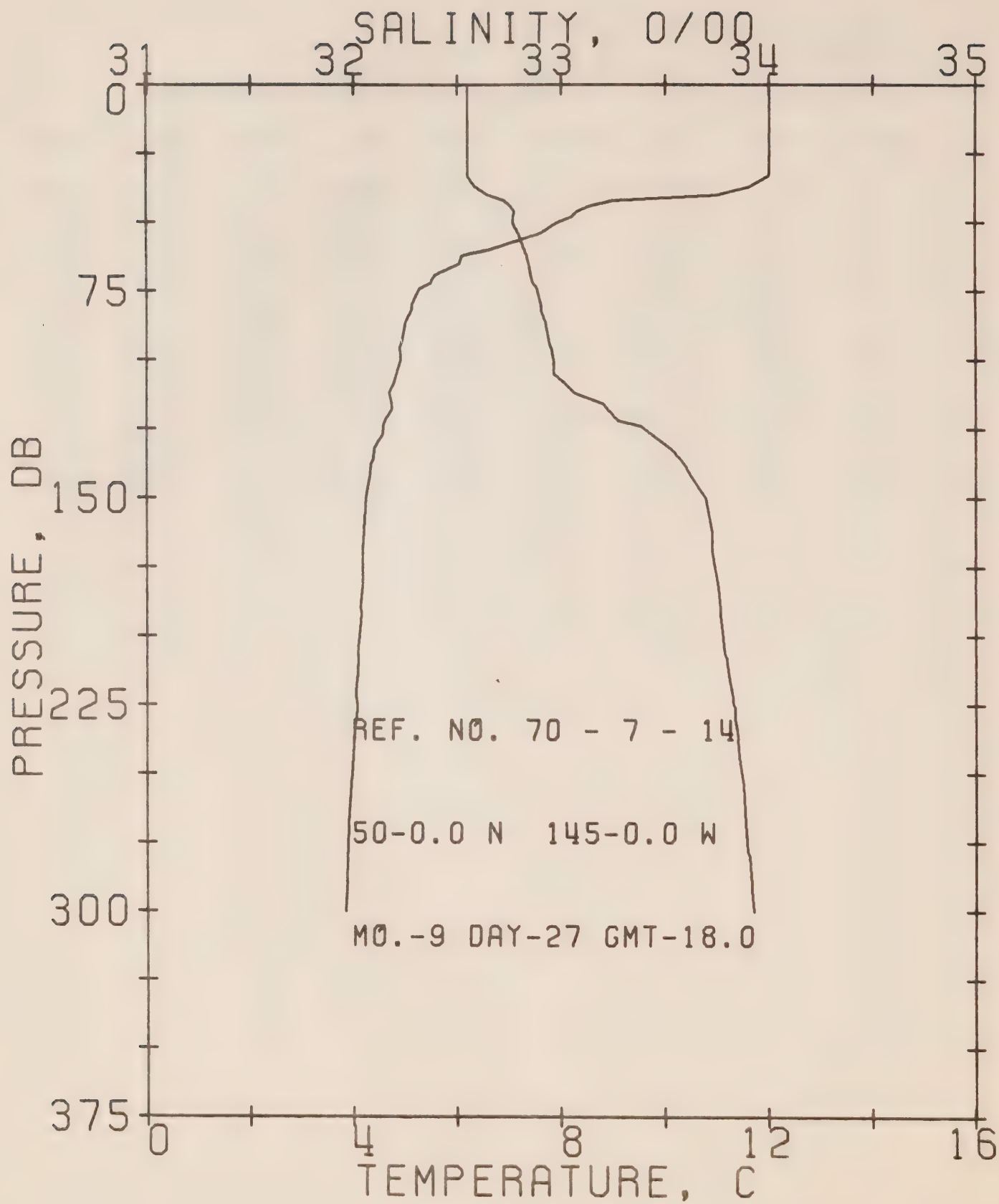
REFERENCE NO. 70- 7- 13

DATE 24/ 9/70

POSITION 50- 0.0N, 145- 0.0W GMT 17.2

RESULTS OF STP CAST 51 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	11.75	32.47	0	24.70	325.6	0.0	0.0	1493.
10	11.75	32.47	10	24.70	326.0	0.33	0.02	1494.
20	11.75	32.47	20	24.70	326.2	0.65	0.07	1494.
30	11.65	32.47	30	24.71	324.7	0.98	0.15	1494.
50	6.89	32.76	50	25.70	231.1	1.51	0.36	1477.
75	5.21	32.82	75	25.95	207.4	2.05	0.71	1470.
100	4.79	32.88	99	26.05	198.1	2.56	1.16	1469.
125	4.46	33.42	124	26.51	154.8	3.02	1.69	1469.
150	4.22	33.69	149	26.75	132.2	3.37	2.17	1468.
175	4.09	33.75	174	26.81	126.8	3.69	2.71	1468.
200	3.98	33.80	199	26.86	122.1	4.00	3.30	1468.
225	3.91	33.86	223	26.91	117.3	4.30	3.95	1469.
250	3.86	33.89	248	26.94	114.6	4.59	4.65	1469.
300	3.76	33.96	298	27.01	108.5	5.15	6.22	1469.



PACIFIC OCEANOGRAPHIC GROUP

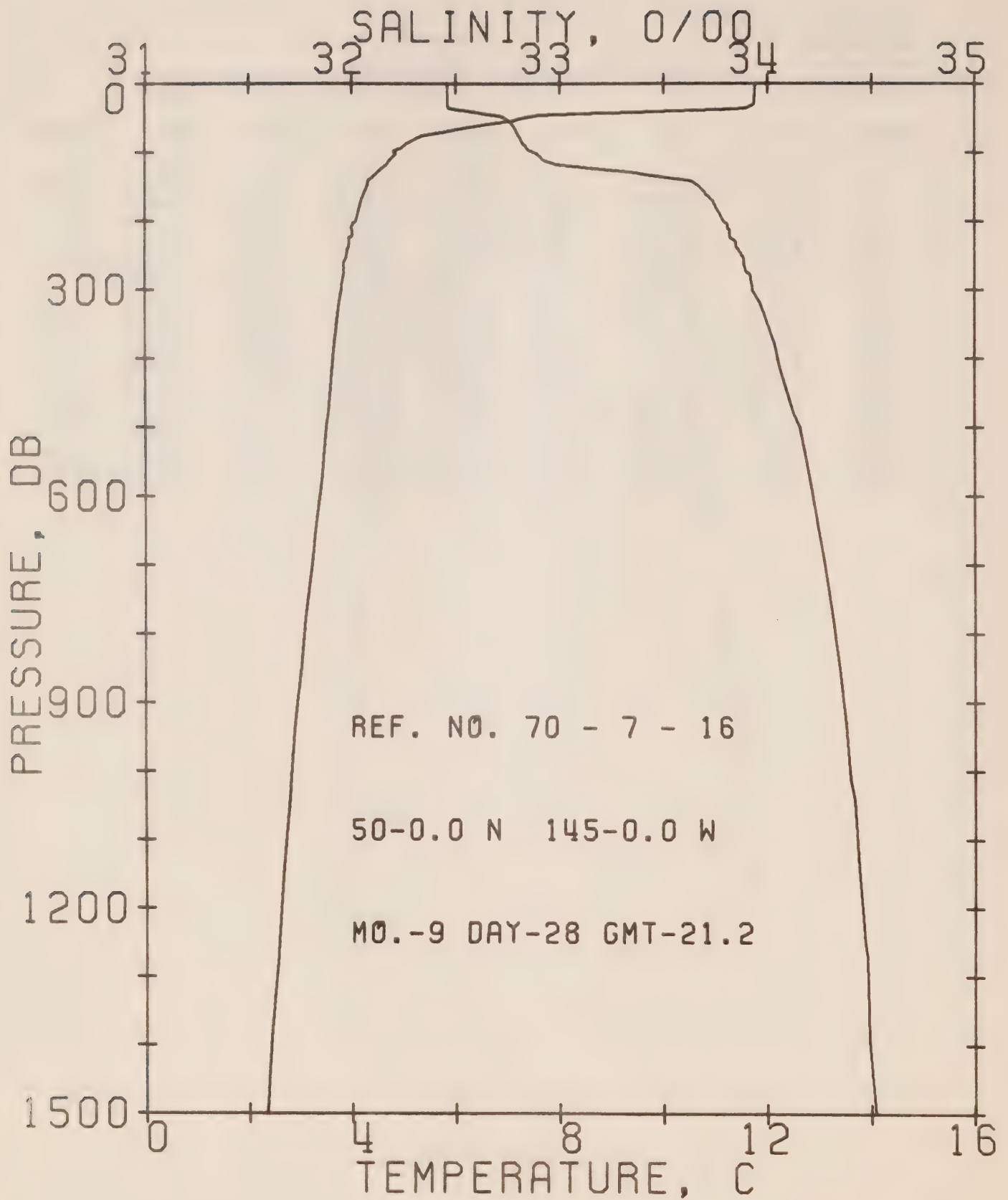
REFERENCE NO. 70- 7- 14

DATE 27/ 9/70

POSITION 50- 0.0N, 145- 0.0W GMT 18.0

RESULTS OF STP CAST 57 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	12.02	32.55	0	24.71	324.5	0.0	0.0	1494.
10	12.02	32.55	10	24.71	324.9	0.32	0.02	1495.
20	12.02	32.55	20	24.71	325.1	0.65	0.07	1495.
30	12.02	32.55	30	24.71	325.4	0.97	0.15	1495.
50	7.96	32.77	50	25.55	245.0	1.55	0.38	1481.
75	5.28	32.89	75	26.00	202.6	2.10	0.73	1471.
100	4.93	32.97	99	26.10	193.2	2.60	1.17	1470.
125	4.59	33.41	124	26.48	157.1	3.05	1.68	1469.
150	4.25	33.70	149	26.75	131.8	3.40	2.18	1469.
175	4.18	33.74	174	26.79	128.0	3.73	2.72	1469.
200	4.12	33.78	199	26.83	124.6	4.04	3.32	1469.
225	4.05	33.83	223	26.88	120.2	4.35	3.98	1469.
250	3.97	33.87	248	26.92	116.8	4.64	4.70	1469.
300	3.83	33.93	298	26.98	111.4	5.21	6.30	1470.



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 7- 16

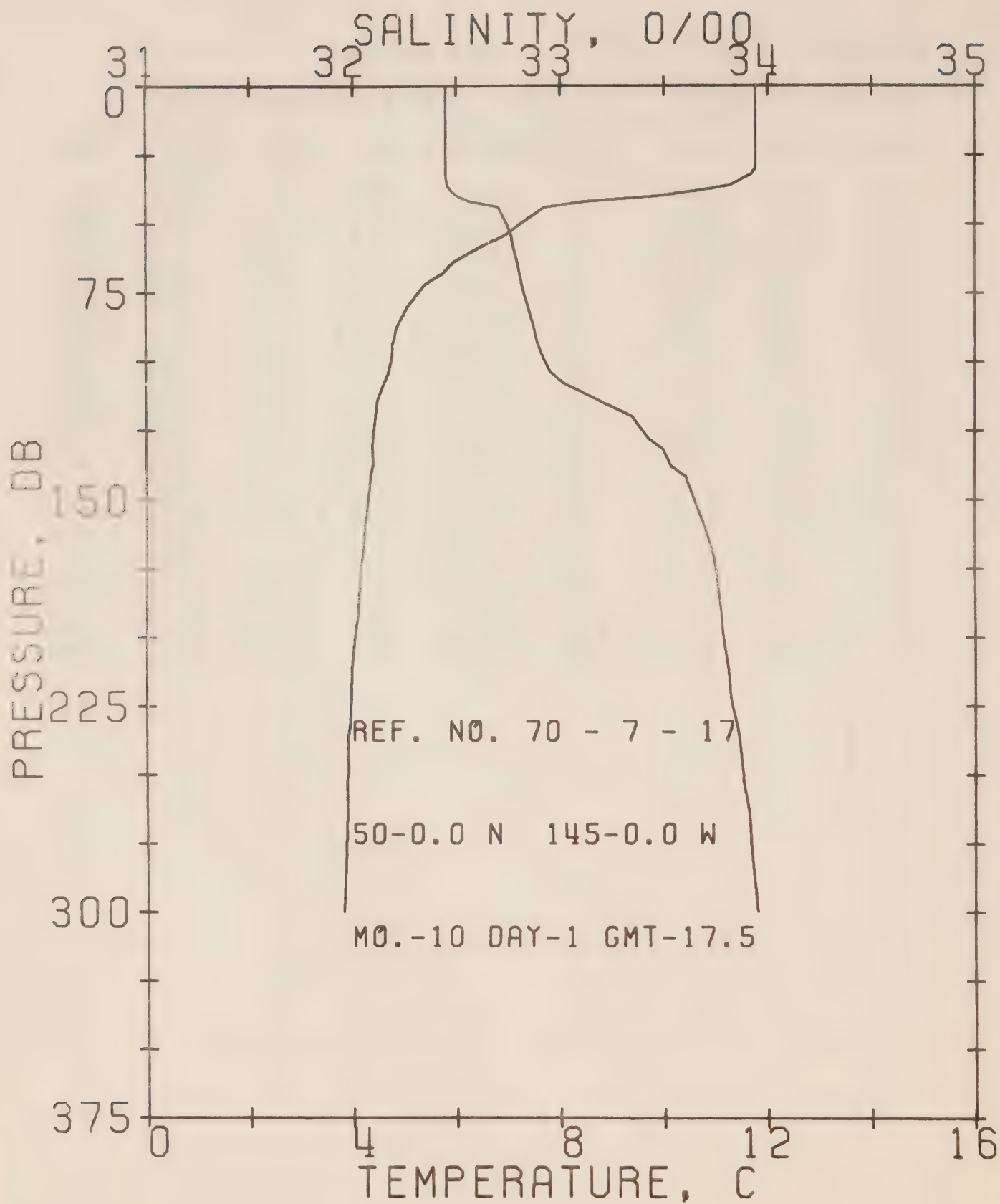
DATE 28/ 9/70

POSITION 50- 0.0N, 145- 0.0W GMT 21.2

RESULTS OF STP CAST 66 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	11.79	32.46	0	24.68	327.0	0.0	0.0	1494.
10	11.77	32.46	10	24.69	327.1	0.33	0.02	1494.
20	11.76	32.46	20	24.69	327.2	0.65	0.07	1494.
30	11.76	32.46	30	24.69	327.3	0.98	0.15	1494.
50	7.32	32.74	50	25.62	238.6	1.56	0.38	1478.
75	5.45	32.81	75	25.91	210.8	2.12	0.74	1471.
100	4.81	32.88	99	26.04	198.7	2.63	1.19	1469.
125	4.57	33.21	124	26.33	171.6	3.11	1.74	1469.
150	4.31	33.68	149	26.73	134.1	3.48	2.25	1469.
175	4.18	33.75	174	26.80	127.6	3.81	2.79	1469.
200	4.09	33.79	199	26.84	123.4	4.12	3.39	1469.
225	3.95	33.83	223	26.89	119.5	4.42	4.05	1469.
250	3.91	33.88	248	26.93	115.5	4.72	4.76	1469.
300	3.82	33.93	298	26.98	111.3	5.28	6.35	1470.
400	3.64	34.05	397	27.09	101.1	6.34	10.09	1471.
500	3.51	34.16	496	27.19	92.5	7.31	14.54	1472.
600	3.38	34.22	595	27.25	87.3	8.21	19.57	1473.
800	3.07	34.33	793	27.37	77.5	9.85	31.26	1475.
1000	2.83	34.40	990	27.44	71.0	11.33	44.79	1477.
1200	2.62	34.46	1188	27.51	65.5	12.69	59.99	1480.
1500	2.32	34.52	1484	27.59	59.0	14.55	85.63	1484.





PACIFIC OCEANOGRAPHIC GROUP

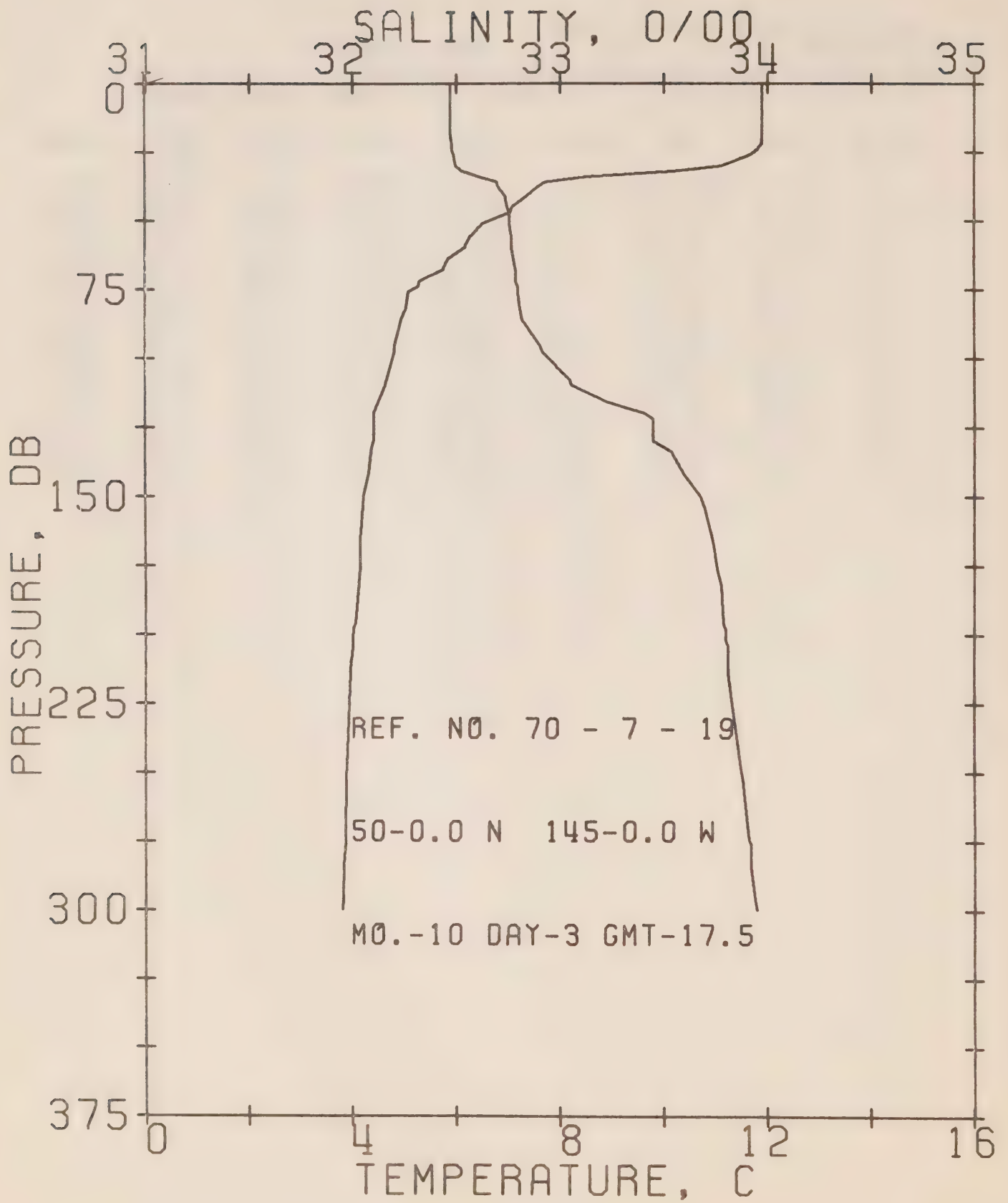
REFERENCE NO. 70- 7- 17

DATE 1/10/70

POSITION 50- 0.0N, 145- 0.0W GMT 17.5

RESULTS OF STP CAST 43 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	11.79	32.45	0	24.67	327.8	0.0	0.0	1494.
10	11.79	32.45	10	24.67	328.2	0.33	0.02	1494.
20	11.79	32.45	20	24.67	328.4	0.66	0.07	1494.
30	11.79	32.45	30	24.67	328.6	0.98	0.15	1494.
50	7.27	32.75	50	25.64	237.1	1.55	0.38	1478.
75	5.31	32.83	75	25.95	207.5	2.11	0.73	1471.
100	4.77	32.93	99	26.09	194.3	2.61	1.17	1469.
125	4.42	33.40	124	26.50	155.8	3.05	1.68	1469.
150	4.30	33.65	149	26.71	136.1	3.41	2.18	1469.
175	4.16	33.75	174	26.80	127.2	3.74	2.72	1469.
200	4.04	33.79	199	26.84	123.5	4.05	3.32	1469.
225	3.95	33.83	223	26.89	119.6	4.35	3.98	1469.
250	3.89	33.88	248	26.93	115.4	4.65	4.69	1469.
300	3.79	33.95	298	27.00	109.6	5.21	6.26	1469.



PACIFIC OCEANOGRAPHIC GROUP

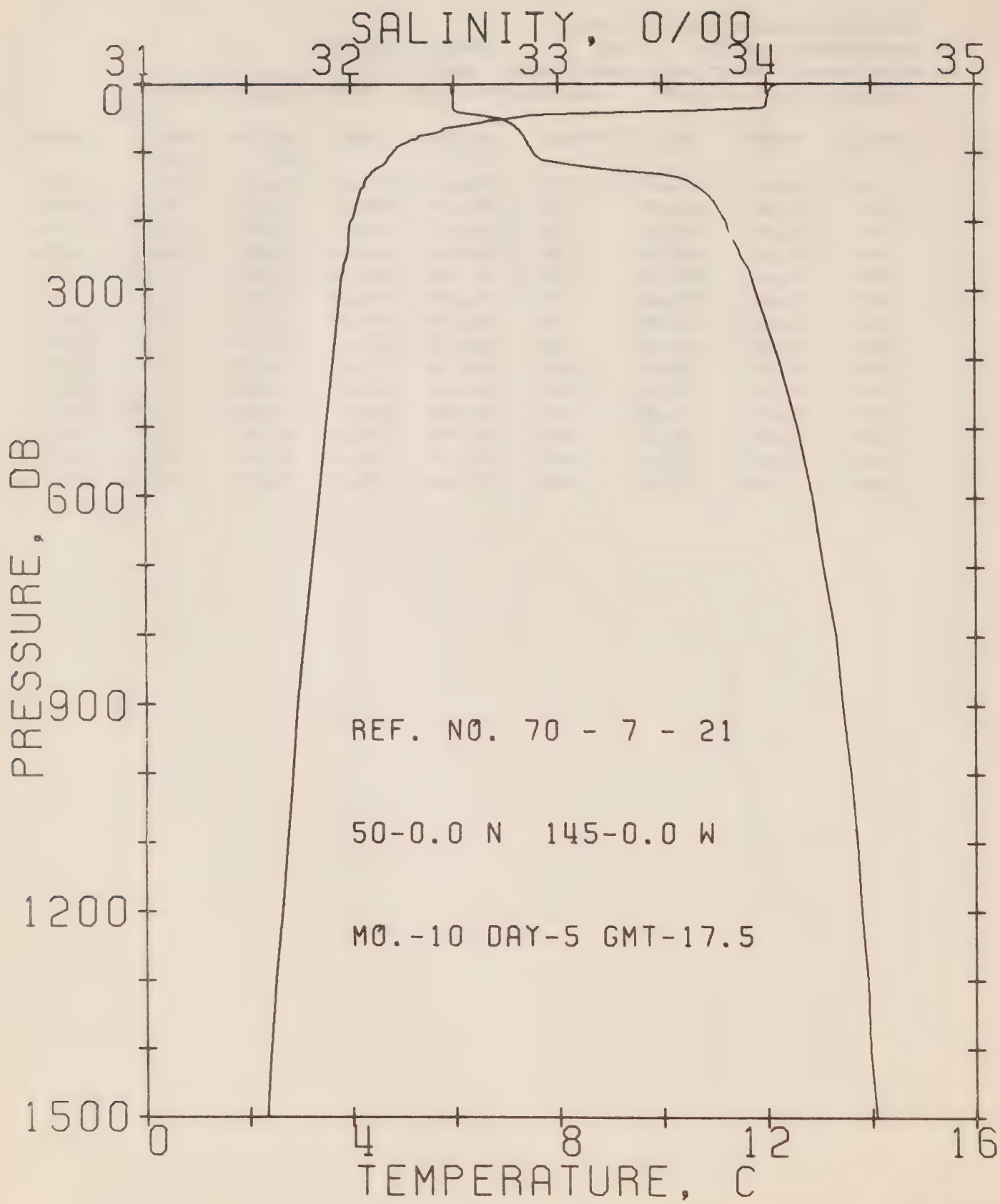
REFERENCE NO. 70- 7- 19

DATE 3/10/70

POSITION 50- 0.0N, 145- 0.0W GMT 17.5

RESULTS OF STP CAST 52 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	11.90	32.47	0	24.67	328.2	0.0	0.0	1494.
10	11.90	32.47	10	24.67	328.6	0.33	0.02	1494.
20	11.90	32.47	20	24.67	328.5	0.66	0.07	1494.
30	11.13	32.50	30	24.83	313.5	0.98	0.15	1492.
50	6.67	32.76	50	25.72	228.6	1.48	0.35	1476.
75	5.19	32.80	75	25.94	208.6	2.03	0.70	1470.
100	4.80	32.95	99	26.10	193.6	2.53	1.15	1469.
125	4.43	33.45	124	26.53	152.2	2.97	1.65	1469.
150	4.23	33.68	149	26.74	133.0	3.33	2.15	1468.
175	4.16	33.76	174	26.81	126.7	3.65	2.68	1469.
200	4.02	33.80	199	26.85	122.3	3.96	3.28	1469.
225	3.93	33.83	223	26.89	119.4	4.27	3.93	1469.
250	3.87	33.87	248	26.93	115.7	4.56	4.64	1469.
300	3.79	33.95	298	27.00	109.6	5.12	6.22	1469.





PACIFIC OCEANOGRAPHIC GROUP

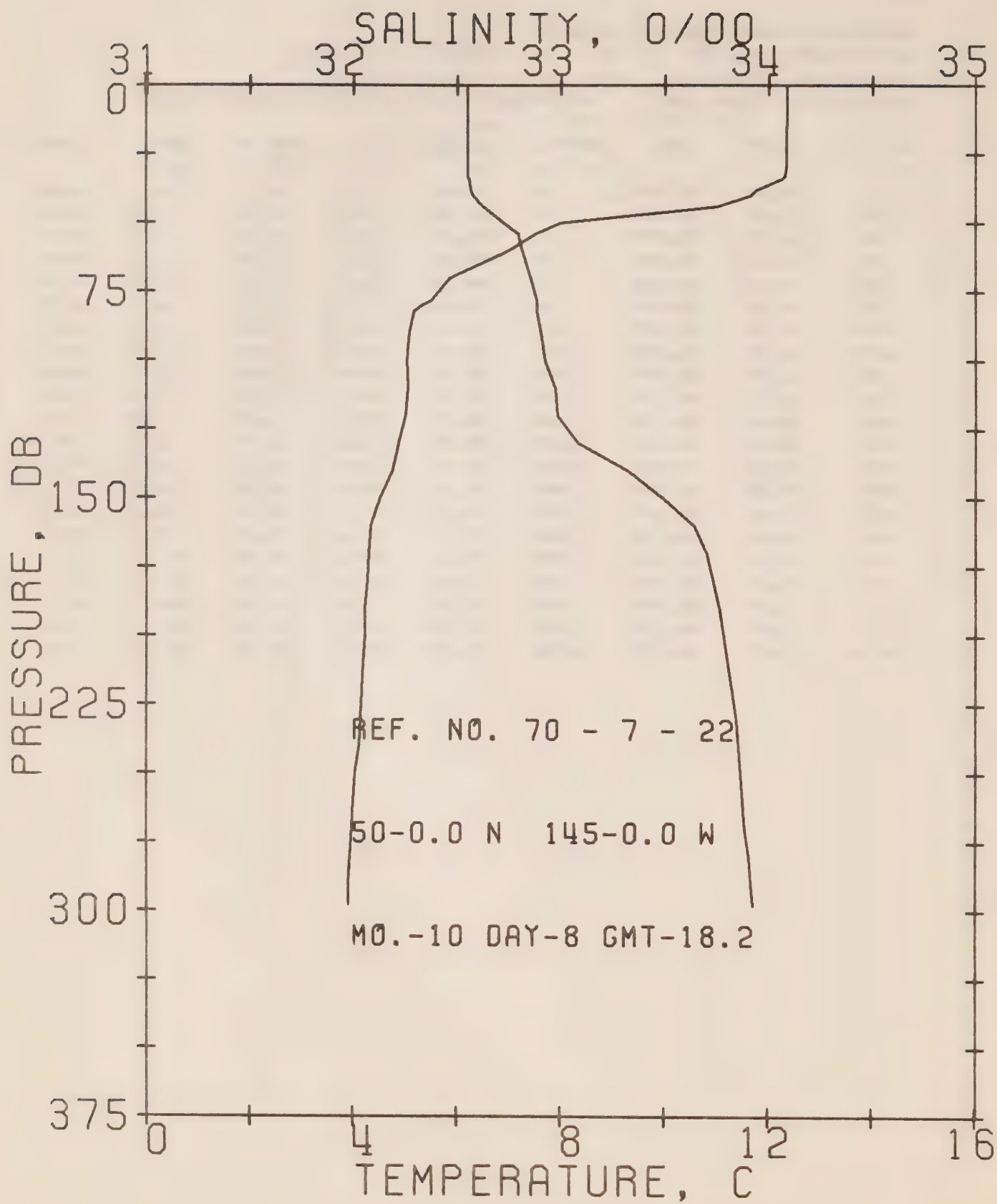
REFERENCE NO. 70- 7- 21

DATE 5/10/70

POSITION 50- 0.0N, 145- 0.0W GMT 17.5

RESULTS OF STP CAST 60 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	12.22	32.49	0	24.62	332.5	0.0	0.0	1495.
10	12.05	32.49	10	24.66	329.8	0.33	0.02	1495.
20	12.03	32.50	20	24.67	329.0	0.66	0.07	1495.
30	12.01	32.50	30	24.67	328.9	0.99	0.15	1495.
50	7.03	32.74	50	25.66	234.7	1.56	0.38	1477.
75	5.35	32.84	75	25.95	207.2	2.10	0.72	1471.
100	4.83	32.89	99	26.05	198.2	2.61	1.17	1469.
125	4.45	33.28	124	26.40	165.1	3.08	1.71	1468.
150	4.23	33.68	149	26.74	133.0	3.43	2.21	1468.
175	4.13	33.76	174	26.81	126.2	3.75	2.74	1469.
200	4.00	33.81	199	26.87	121.3	4.06	3.33	1469.
225	3.98	33.84	223	26.89	119.1	4.37	3.98	1469.
250	3.93	33.88	248	26.93	115.9	4.66	4.69	1469.
300	3.80	33.95	298	27.00	109.7	5.22	6.27	1469.
400	3.65	34.06	397	27.10	100.6	6.27	9.99	1471.
500	3.51	34.15	496	27.18	93.3	7.24	14.42	1472.
600	3.38	34.22	595	27.25	87.4	8.14	19.47	1473.
800	3.08	34.33	793	27.37	77.4	9.80	31.21	1475.
1000	2.84	34.40	990	27.45	70.9	11.28	44.80	1478.
1200	2.63	34.45	1188	27.50	66.1	12.65	60.10	1480.
1500	2.31	34.52	1484	27.59	58.9	14.52	85.77	1484.



PACIFIC OCEANOGRAPHIC GROUP

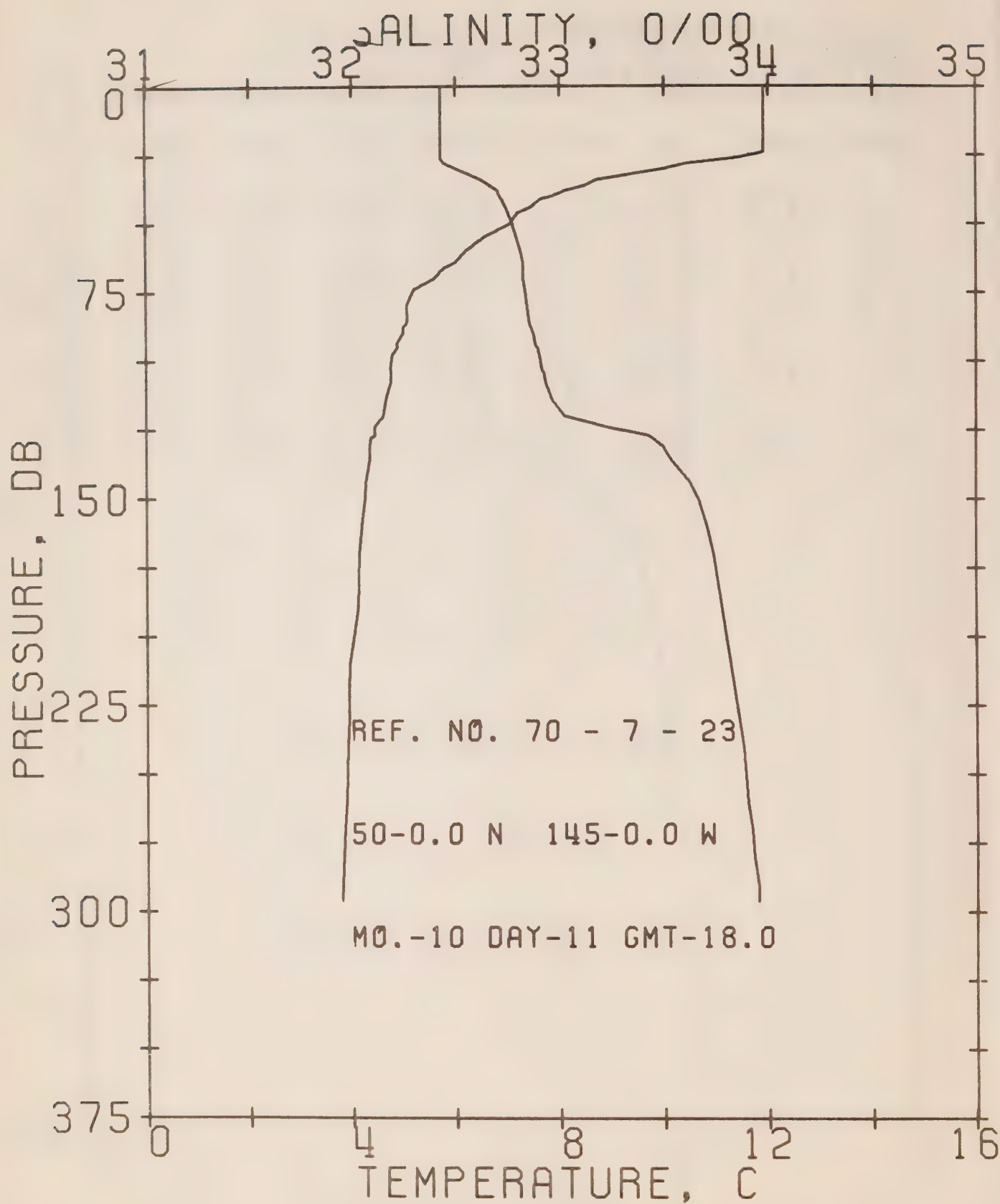
REFERENCE NO. 70- 7- 22

DATE 8/10/70

POSITION 50- 0.0N, 145- 0.0W GMT 18.2

RESULTS OF STP CAST 36 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	12.38	32.55	0	24.64	330.9	0.0	0.0	1496.
10	12.37	32.55	10	24.64	331.3	0.33	0.02	1496.
20	12.37	32.55	20	24.64	331.3	0.66	0.07	1496.
30	12.36	32.55	30	24.64	331.5	0.99	0.15	1496.
50	8.03	32.73	50	25.51	248.9	1.61	0.40	1481.
75	5.66	32.88	75	25.94	207.9	2.17	0.76	1472.
100	5.04	32.93	99	26.06	197.4	2.67	1.20	1470.
125	4.96	33.04	124	26.15	188.6	3.16	1.76	1470.
150	4.53	33.50	149	26.56	149.6	3.58	2.35	1470.
175	4.29	33.72	174	26.77	130.5	3.93	2.92	1469.
200	4.23	33.79	199	26.83	125.2	4.25	3.53	1469.
225	4.15	33.84	223	26.87	120.9	4.55	4.19	1470.
250	4.03	33.87	248	26.91	117.6	4.85	4.91	1470.



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 7- 23

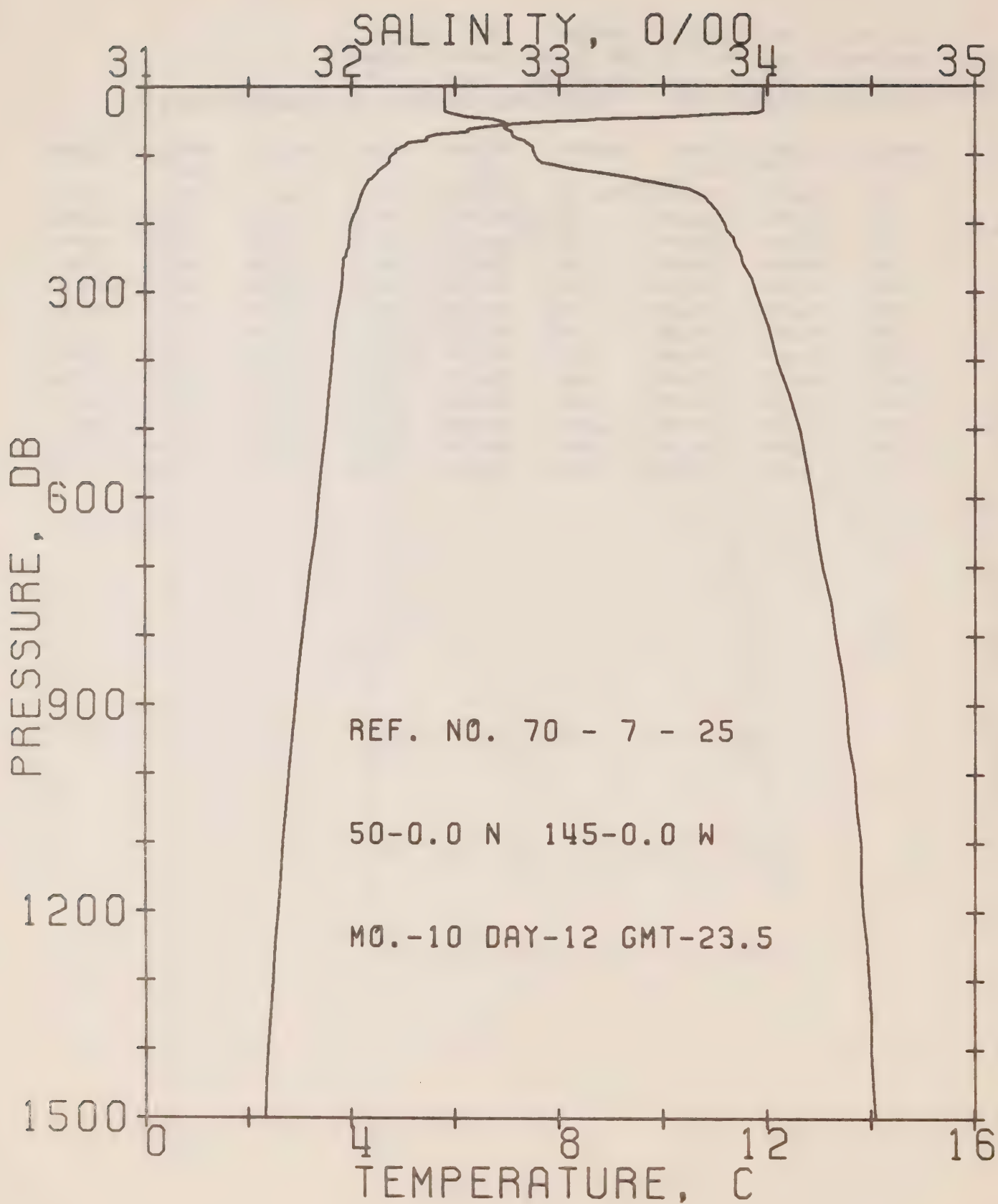
DATE 11/10/70

POSITION 50- 0.0N, 145- 0.0W GMT 18.0

RESULTS OF STP CAST 53 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	11.94	32.43	0	24.63	331.9	0.0	0.0	1494.
10	11.94	32.43	10	24.63	332.4	0.33	0.02	1494.
20	11.94	32.43	20	24.63	332.6	0.66	0.07	1494.
30	10.03	32.51	30	25.03	294.8	0.99	0.15	1488.
50	7.08	32.78	50	25.69	232.4	1.49	0.35	1477.
75	5.20	32.84	75	25.97	205.6	2.03	0.70	1470.
100	4.78	32.91	99	26.07	195.9	2.54	1.15	1469.
125	4.46	33.30	124	26.41	164.0	3.01	1.69	1469.
150	4.27	33.67	149	26.73	134.2	3.37	2.19	1469.
175	4.14	33.75	174	26.80	127.1	3.69	2.73	1469.
200	4.04	33.80	199	26.85	122.5	4.01	3.32	1469.
225	3.93	33.85	223	26.90	117.9	4.31	3.97	1469.
250	3.90	33.89	248	26.94	114.8	4.60	4.68	1469.





PACIFIC OCEANOGRAPHIC GROUP

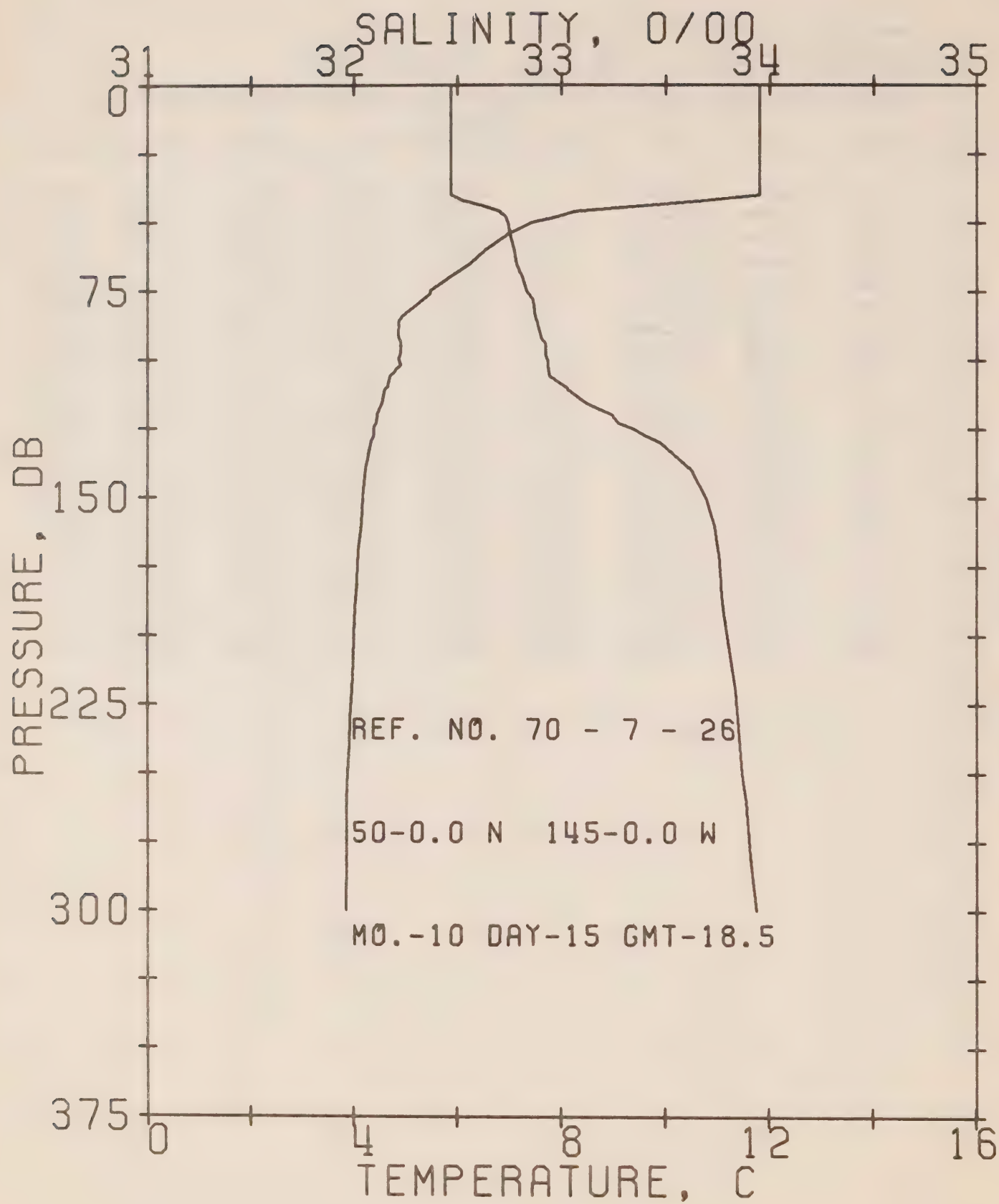
REFERENCE NO. 70- 7- 25

DATE 12/10/70

POSITION 50- 0.0N, 145- 0.0W GMT 23.5

RESULTS OF STP CAST 79 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	11.94	32.45	0	24.65	330.4	0.0	0.0	1494.
10	11.94	32.45	10	24.65	330.8	0.33	0.02	1494.
20	11.94	32.45	20	24.65	331.0	0.66	0.07	1494.
30	11.94	32.45	30	24.65	331.3	0.99	0.15	1495.
50	8.53	32.71	50	25.42	257.4	1.61	0.40	1483.
75	5.48	32.80	75	25.90	212.1	2.18	0.76	1471.
100	4.81	32.89	99	26.05	197.7	2.69	1.21	1469.
125	4.53	33.18	124	26.31	173.7	3.16	1.76	1469.
150	4.27	33.63	149	26.69	137.2	3.55	2.29	1469.
175	4.15	33.74	174	26.80	127.6	3.88	2.84	1469.
200	4.02	33.80	199	26.86	122.3	4.19	3.43	1469.
225	3.98	33.84	223	26.89	118.8	4.49	4.09	1469.
250	3.89	33.88	248	26.93	115.5	4.78	4.80	1469.
300	3.83	33.95	298	26.99	110.0	5.35	6.37	1470.
400	3.65	34.05	397	27.09	101.5	6.40	10.11	1471.
500	3.53	34.16	496	27.19	92.8	7.37	14.55	1472.
600	3.39	34.22	595	27.25	87.5	8.27	19.59	1473.
800	3.06	34.33	793	27.37	77.2	9.92	31.33	1475.
1000	2.80	34.42	990	27.47	69.0	11.38	44.70	1477.
1200	2.58	34.46	1188	27.52	64.8	12.71	59.65	1480.
1500	2.31	34.52	1484	27.59	58.9	14.55	84.94	1484.



PACIFIC OCEANOGRAPHIC GROUP

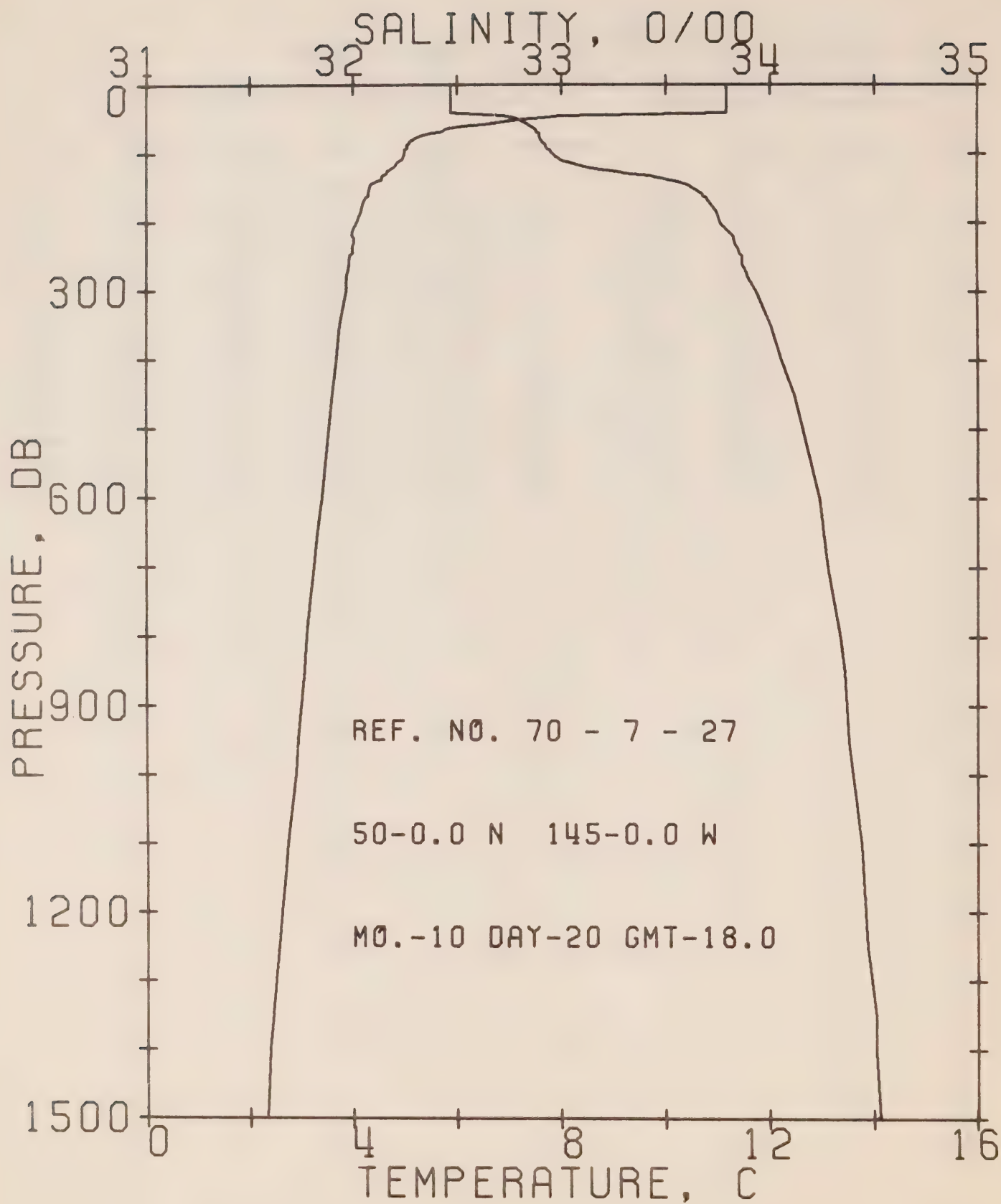
REFERENCE NO. 70- 7- 26

DATE 15/10/70

POSITION 50- 0.0N, 145- 0.0W GMT 18.5

RESULTS OF STP CAST 47 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	11.33	32.47	0	24.68	327.0	0.0	0.0	1494.
10	11.83	32.47	10	24.68	327.5	0.33	0.02	1494.
20	11.33	32.47	20	24.68	327.7	0.65	0.07	1494.
30	11.83	32.47	30	24.68	327.9	0.98	0.15	1494.
50	7.47	32.75	50	25.61	239.8	1.58	0.39	1479.
75	5.50	32.84	75	25.93	209.0	2.14	0.75	1471.
100	4.88	32.94	99	26.08	194.9	2.64	1.19	1469.
125	4.41	33.35	124	26.46	159.5	3.10	1.71	1468.
150	4.20	33.70	149	26.76	131.2	3.45	2.20	1468.
175	4.09	33.76	174	26.82	125.5	3.77	2.73	1468.
200	4.01	33.80	199	26.86	122.2	4.08	3.33	1469.
225	3.95	33.84	223	26.90	118.5	4.38	3.98	1469.
250	3.88	33.87	248	26.92	116.1	4.68	4.69	1469.
300	3.84	33.94	298	26.98	110.8	5.24	6.27	1470.





PACIFIC OCEANOGRAPHIC GROUP

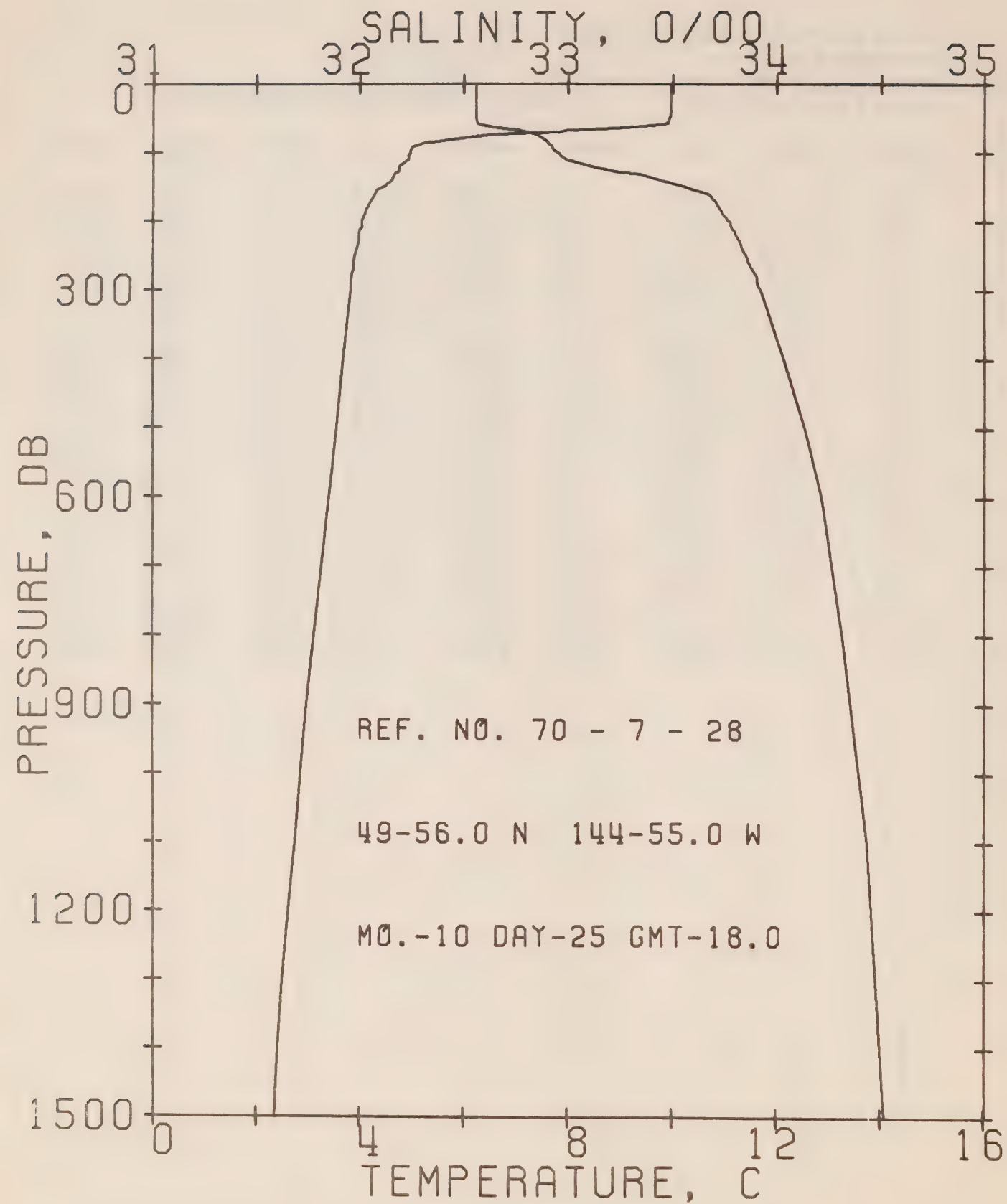
REFERENCE NO. 70- 7- 27

DATE 20/10/70

POSITION 50- 0.0N, 145- 0.0W GMT 18.0

RESULTS OF STP CAST 72 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	11.18	32.47	0	24.80	315.8	0.0	0.0	1491.
10	11.18	32.47	10	24.80	316.2	0.32	0.02	1492.
20	11.18	32.47	20	24.80	316.4	0.63	0.06	1492.
30	11.18	32.47	30	24.80	316.6	0.95	0.15	1492.
50	7.28	32.80	50	25.67	233.5	1.53	0.38	1478.
75	5.30	32.90	75	26.00	202.2	2.07	0.72	1471.
100	5.03	32.97	99	26.09	194.5	2.56	1.16	1470.
125	4.71	33.24	124	26.34	170.7	3.03	1.69	1470.
150	4.36	33.64	149	26.69	137.6	3.40	2.22	1469.
175	4.22	33.73	174	26.78	129.6	3.74	2.77	1469.
200	4.10	33.77	199	26.82	125.5	4.06	3.38	1469.
225	4.04	33.83	223	26.88	120.3	4.36	4.04	1469.
250	3.96	33.87	248	26.92	116.9	4.66	4.76	1469.
300	3.89	33.94	298	26.98	111.3	5.23	6.36	1470.
400	3.70	34.06	397	27.09	101.1	6.29	10.12	1471.
500	3.55	34.16	496	27.19	93.0	7.25	14.54	1472.
600	3.42	34.24	595	27.26	86.4	8.15	19.56	1473.
800	3.11	34.34	793	27.37	77.0	9.79	31.21	1475.
1000	2.89	34.40	990	27.44	71.4	11.27	44.82	1478.
1200	2.61	34.46	1188	27.51	65.1	12.63	60.01	1480.
1500	2.31	34.53	1484	27.59	58.1	14.47	85.21	1484.



PACIFIC OCEANOGRAPHIC GROUP

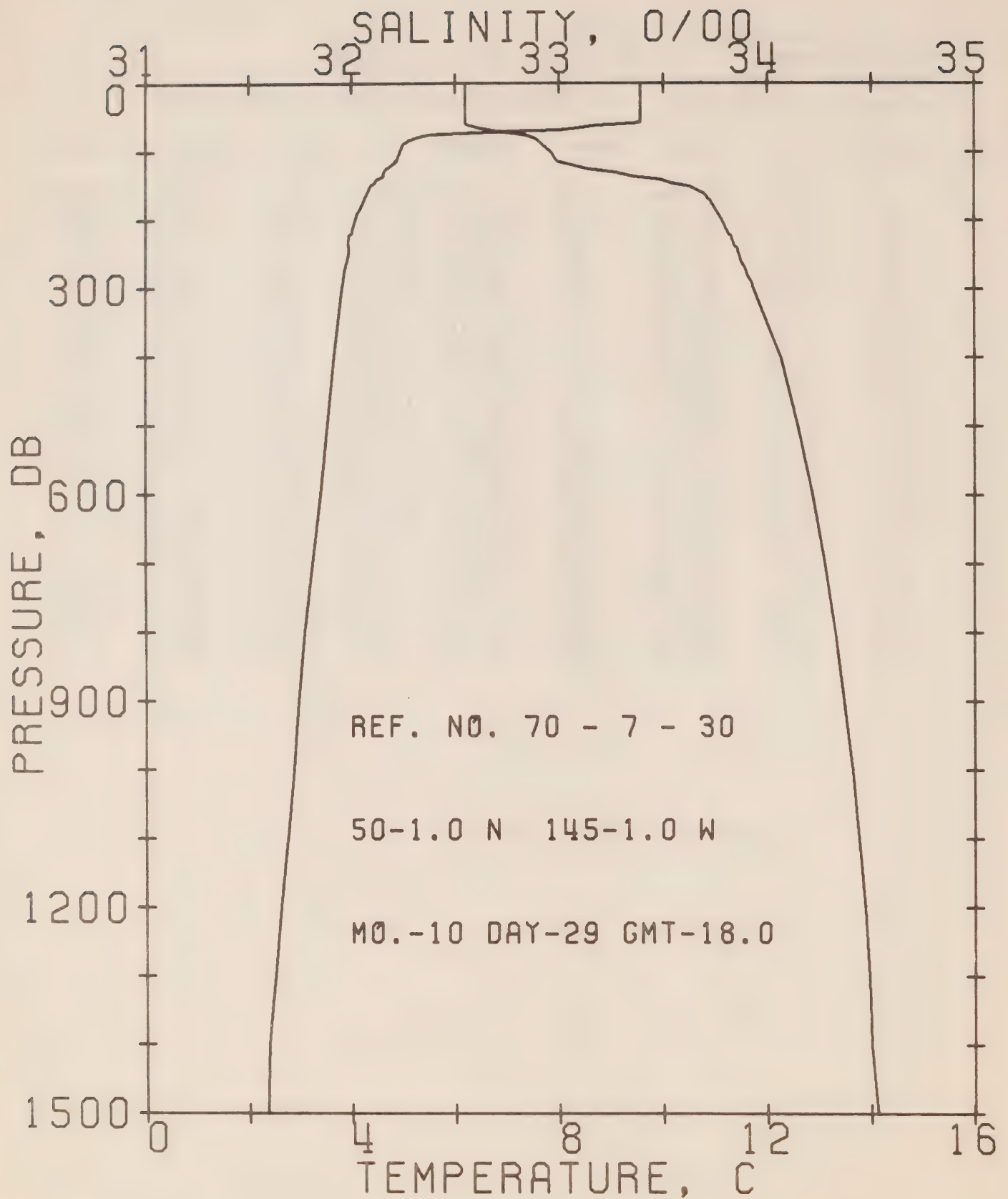
REFERENCE NO. 70- 7- 28

DATE 25/10/70

POSITION 49-56.0N, 144-55.0W GMT 18.0

RESULTS OF STP CAST 57 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	10.01	32.56	0	25.07	289.9	0.0	0.0	1487.
10	9.99	32.56	10	25.07	290.0	0.29	0.01	1487.
20	9.99	32.56	20	25.07	290.2	0.58	0.06	1488.
30	9.99	32.56	30	25.07	290.4	0.87	0.13	1488.
50	9.96	32.56	50	25.08	290.1	1.45	0.37	1488.
75	6.42	32.86	75	25.84	218.0	2.11	0.79	1475.
100	5.01	32.96	99	26.08	194.8	2.62	1.24	1470.
125	4.78	33.20	124	26.30	174.5	3.09	1.77	1470.
150	4.48	33.57	149	26.62	143.9	3.48	2.32	1469.
175	4.22	33.72	174	26.77	130.2	3.82	2.88	1469.
200	4.07	33.78	199	26.83	124.4	4.14	3.49	1469.
225	4.01	33.82	223	26.87	121.0	4.44	4.15	1469.
250	3.94	33.86	248	26.91	117.4	4.74	4.88	1469.
300	3.86	33.93	298	26.97	111.8	5.32	6.48	1470.
400	3.71	34.04	397	27.08	102.8	6.39	10.28	1471.
500	3.58	34.14	496	27.17	94.7	7.38	14.79	1472.
600	3.43	34.22	595	27.25	87.9	8.29	19.89	1473.
800	3.13	34.32	793	27.36	78.7	9.96	31.74	1475.
1000	2.87	34.40	990	27.44	71.3	11.45	45.45	1478.
1200	2.63	34.46	1188	27.51	65.3	12.81	60.66	1480.
1500	2.33	34.52	1484	27.59	59.1	14.68	86.24	1484.



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 7- 30

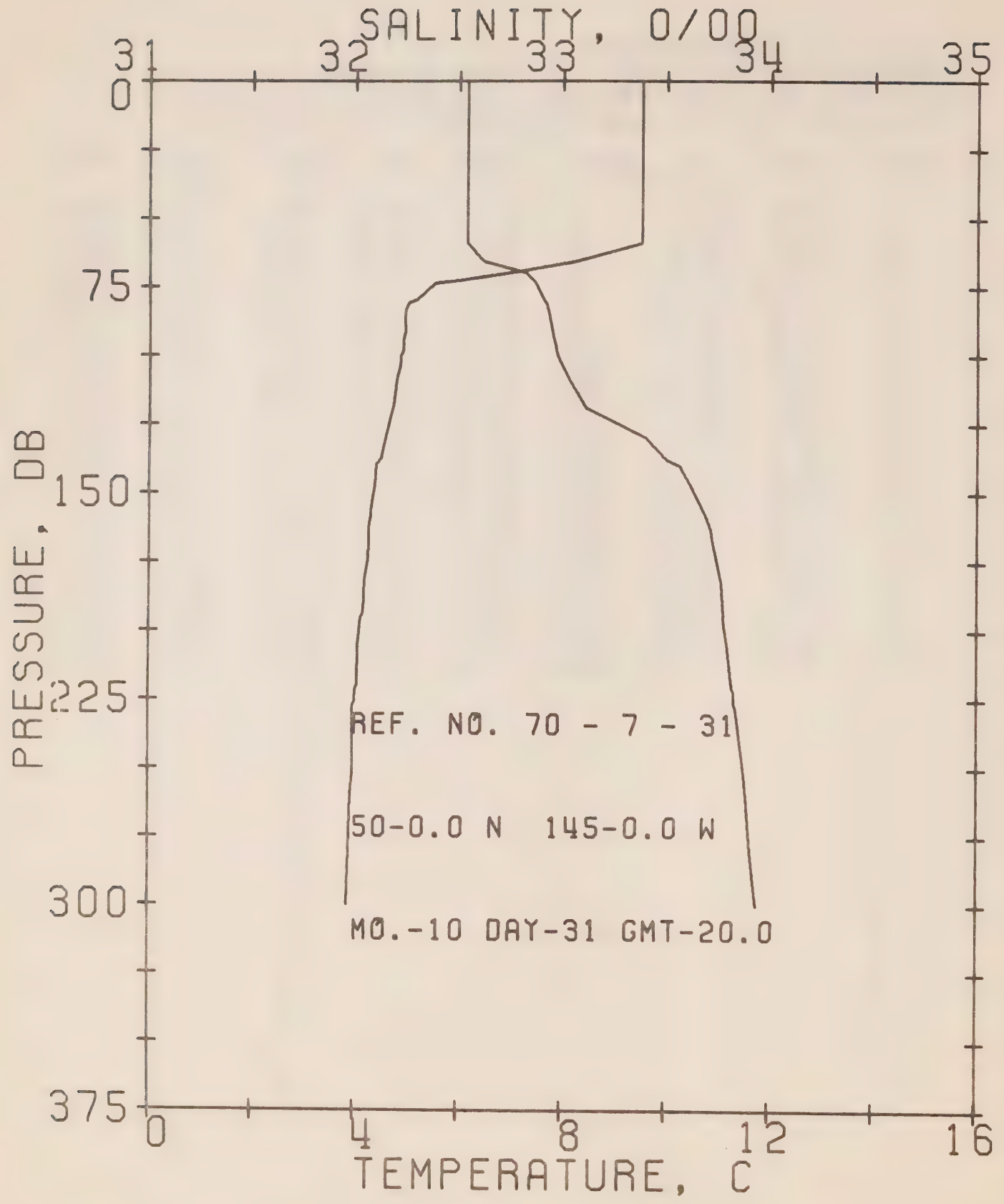
DATE 29/10/70

POSITION 50- 1.0N, 145- 1.0W GMT 18.0

RESULTS OF STP CAST 46 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	9.58	32.55	0	25.13	284.0	0.0	0.0	1486.
10	9.58	32.55	10	25.13	284.4	0.28	0.01	1486.
20	9.58	32.55	20	25.13	284.6	0.57	0.06	1486.
30	9.58	32.55	30	25.13	284.7	0.85	0.13	1486.
50	9.58	32.55	50	25.13	285.1	1.42	0.36	1487.
75	5.53	32.84	75	25.93	209.4	2.08	0.78	1472.
100	4.98	32.97	99	26.09	193.8	2.58	1.22	1470.
125	4.71	33.15	124	26.27	177.6	3.05	1.76	1469.
150	4.40	33.63	149	26.68	138.6	3.44	2.31	1469.
175	4.25	33.74	174	26.78	129.0	3.77	2.86	1469.
200	4.11	33.79	199	26.84	124.0	4.09	3.46	1469.
225	3.98	33.83	223	26.89	119.6	4.39	4.12	1469.
250	3.97	33.87	248	26.92	117.0	4.69	4.84	1469.
300	3.84	33.94	298	26.98	110.8	5.26	6.43	1470.
400	3.68	34.07	397	27.10	100.2	6.31	10.17	1471.
500	3.55	34.15	496	27.18	93.7	7.28	14.60	1472.
600	3.41	34.22	595	27.25	87.7	8.19	19.67	1473.
800	3.10	34.33	793	27.37	77.6	9.84	31.39	1475.
1000	2.88	34.41	990	27.45	70.6	11.32	44.94	1478.
1200	2.62	34.47	1188	27.52	64.5	12.67	60.08	1480.
1500	2.33	34.53	1484	27.59	58.4	14.52	85.37	1484.





PACIFIC OCEANOGRAPHIC GROUP

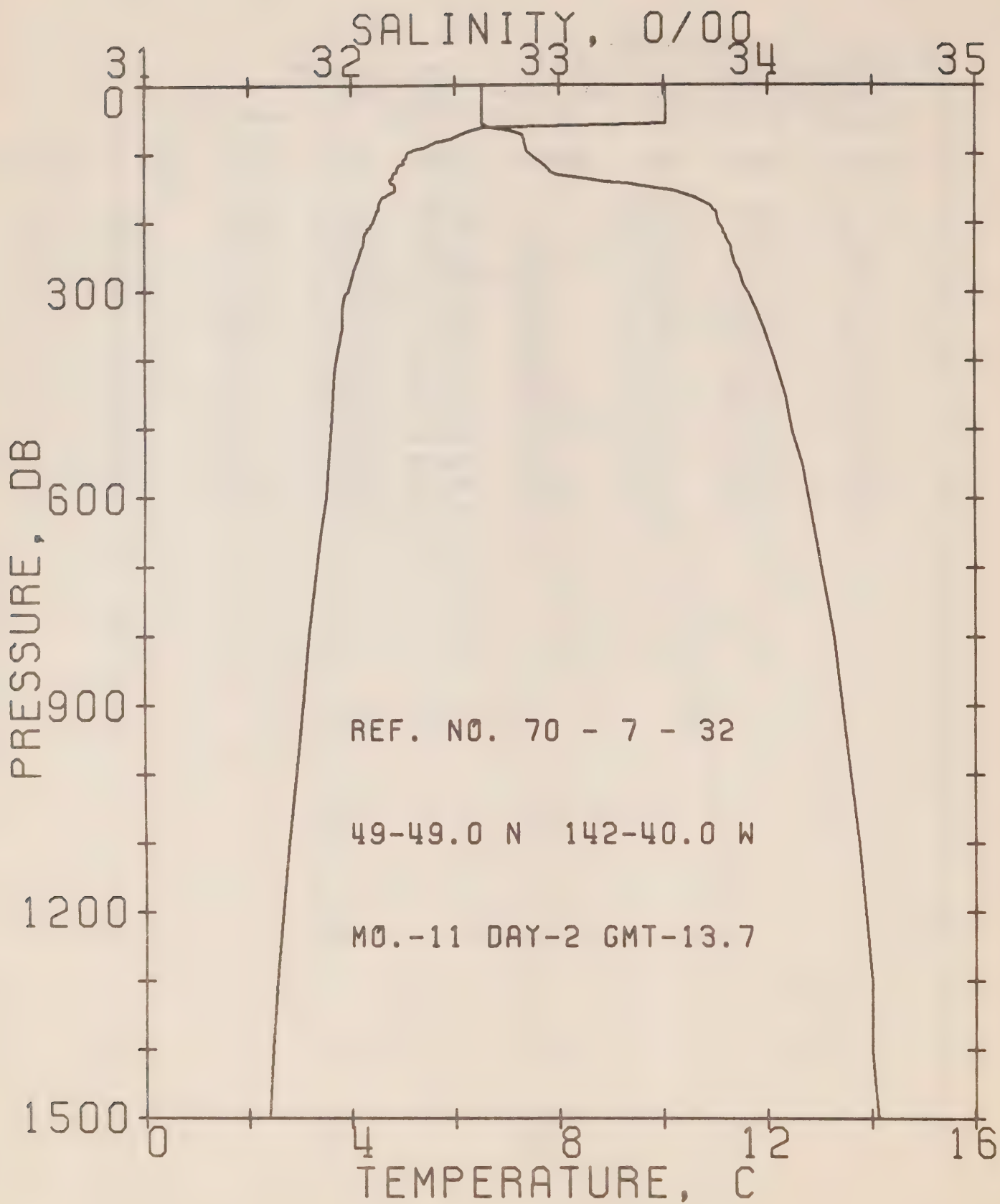
REFERENCE NO. 70- 7- 31

DATE 31/10/70

POSITION 50- 0.0N, 145- 0.0W GMT 20.0

RESULTS OF STP CAST 39 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	9.54	32.54	0	25.13	284.1	0.0	0.0	1486.
10	9.54	32.54	10	25.13	284.5	0.28	0.01	1486.
20	9.54	32.54	20	25.13	284.7	0.57	0.06	1486.
30	9.54	32.54	30	25.13	284.8	0.85	0.13	1486.
50	9.54	32.54	50	25.13	285.2	1.42	0.36	1486.
75	5.52	32.89	75	25.97	205.7	2.08	0.77	1472.
100	4.93	32.98	99	26.11	192.1	2.57	1.21	1470.
125	4.70	33.28	124	26.37	167.9	3.03	1.74	1470.
150	4.39	33.64	149	26.69	137.5	3.40	2.26	1469.
175	4.28	33.75	174	26.79	128.6	3.73	2.80	1469.
200	4.11	33.79	199	26.84	124.1	4.05	3.41	1469.
225	4.01	33.83	223	26.88	120.2	4.35	4.07	1469.
250	3.97	33.88	248	26.92	116.5	4.65	4.78	1469.
300	3.85	33.94	298	26.98	110.9	5.21	6.37	1470.



PACIFIC OCEANOGRAPHIC GROUP

REFERENCE NO. 70- 7- 32

DATE 2/11/70

POSITION 49-49.0N, 142-40.0W GMT 13.7

RESULTS OF STP CAST 67 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	10.05	32.63	0	25.12	285.4	0.0	0.0	1488.
10	10.05	32.63	10	25.12	285.8	0.29	0.01	1488.
20	10.05	32.63	20	25.12	285.9	0.57	0.06	1488.
30	10.06	32.63	30	25.12	286.3	0.86	0.13	1488.
50	10.06	32.63	50	25.12	286.7	1.43	0.36	1488.
75	6.05	32.83	75	25.86	215.8	2.05	0.75	1474.
100	5.12	32.87	99	26.00	203.0	2.57	1.22	1470.
125	4.92	32.96	124	26.10	193.7	3.07	1.79	1470.
150	4.86	33.47	149	26.51	155.4	3.51	2.40	1471.
175	4.56	33.73	174	26.74	133.0	3.86	2.99	1470.
200	4.46	33.77	199	26.79	129.1	4.19	3.61	1470.
225	4.28	33.81	223	26.84	124.3	4.51	4.30	1470.
250	4.18	33.84	248	26.87	121.4	4.81	5.04	1470.
300	3.98	33.91	298	26.95	114.5	5.40	6.69	1470.
400	3.73	34.04	397	27.08	103.0	6.48	10.54	1471.
500	3.62	34.12	496	27.15	96.6	7.48	15.09	1472.
600	3.53	34.20	595	27.22	90.5	8.41	20.31	1474.
800	3.19	34.32	793	27.35	79.3	10.11	32.37	1476.
1000	2.93	34.40	990	27.44	71.9	11.62	46.21	1478.
1200	2.67	34.47	1188	27.52	65.1	12.99	61.49	1480.
1500	2.37	34.53	1484	27.59	58.8	14.84	86.98	1484.





SURFACE TEMPERATURE AND SALINITY OBSERVATIONS  
(P-70-6)

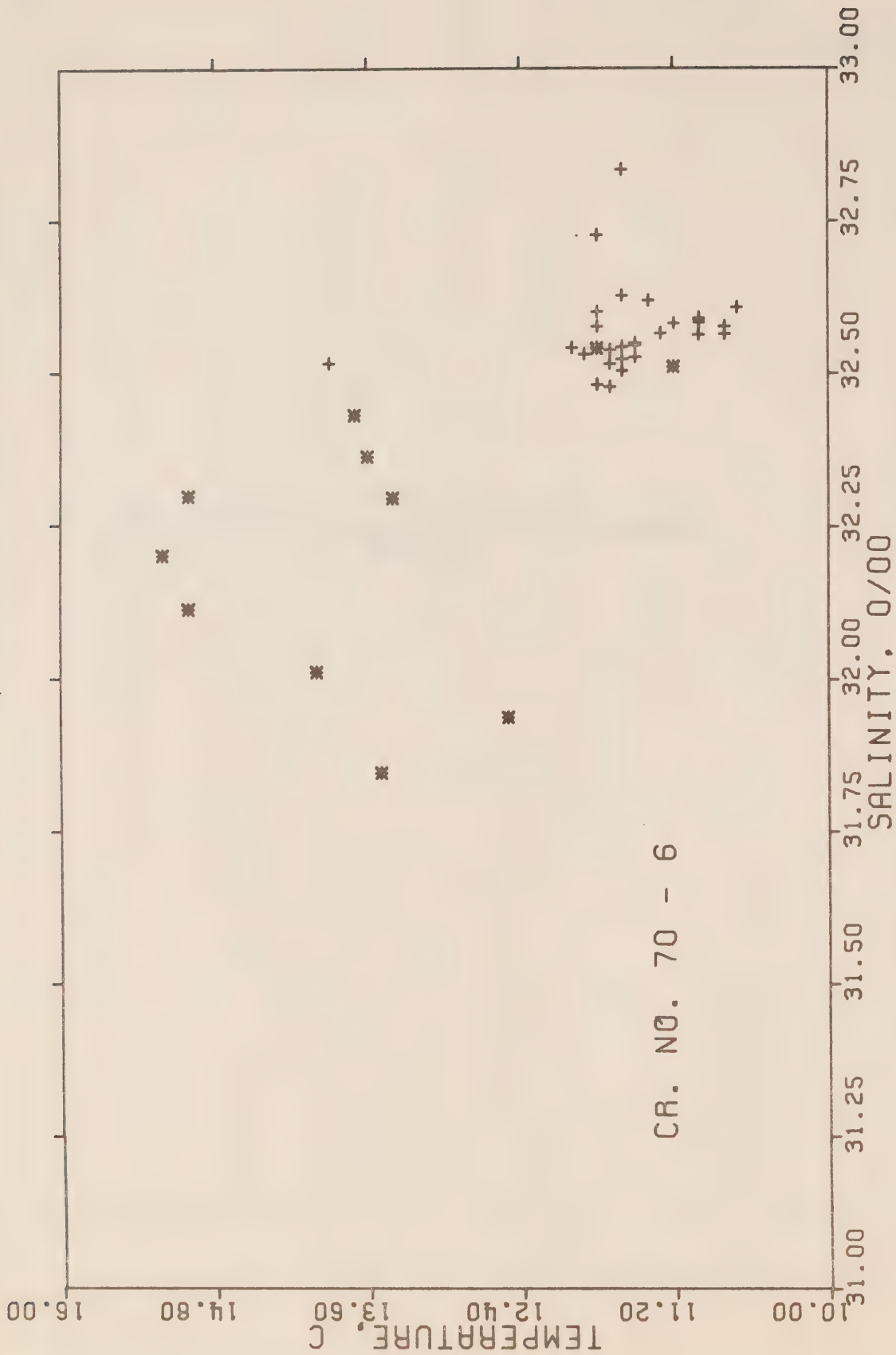


Figure 7 T-S plot of surface temperature and salinity observations on Line P (asterisks) and at Station P (pluses) during Cruise P-70-6.

SURFACE SALINITY AND TEMPERATURE OBSERVATIONS  
CRUISE REFERENCE NUMBER 70- 6

DATE/TIME				SALINITY	TEMP	LONGITUDE
YR	MO	DY	GMT	0/00	C	WEST
70	8	8	6	31.937	12.5	125-33
70	8	8	200	31.846	13.5	126- 0
70	8	8	415	32.011	14.0	126-40
70	8	8	710	32.114	15.0	127-40
70	8	8	1300	32.201	15.2	129-40
70	8	8	1850	32.298	15.0	131-40
70	8	9	36	32.295	13.4	133-40
70	8	9	330	32.363	13.6	134-40
70	8	9	615	32.430	13.7	135-40
70	8	9	1524	32.510	11.2	138-40
70	8	9	1830	32.540	11.8	139-40
70	8	10	615	32.600	11.8	142-40
70	8	11	0	0.000	10.5	145- 0
70	8	12	0	0.000	10.3	144-57
70	8	13	0	0.000	10.2	145- 5
70	8	14	0	0.000	10.6	145- 0
70	8	15	0	32.563	11.0	145- 5
70	8	16	0	32.608	10.7	145- 3
70	8	17	0	32.590	11.0	144-52
70	8	18	0	32.576	10.8	145- 0
70	8	19	0	32.564	10.8	145- 8
70	8	20	0	32.583	11.0	144-57
70	8	21	0	32.587	11.0	144-58
70	8	22	0	32.581	11.2	145- 6
70	8	23	0	32.619	11.4	144-57
70	8	24	0	32.565	11.3	145- 0
70	8	25	0	32.576	11.8	144-54
70	8	26	0	32.478	11.7	145- 5
70	8	27	0	32.515	13.9	145- 0
70	8	28	0	0.000	11.8	145- 1
70	8	29	0	0.000	11.6	145- 5
70	8	30	0	32.834	11.6	145- 3
70	8	31	0	32.627	11.6	145- 0
70	9	1	0	32.726	11.8	145- 5
70	9	2	0	32.481	11.8	144-56
70	9	4	0	32.526	11.5	145- 0
70	9	5	0	32.545	11.5	145-17
70	9	6	0	32.522	11.6	145- 7
70	9	7	0	32.538	11.7	145- 8
70	9	8	0	32.549	11.5	145- 5
70	9	9	0	32.504	11.6	145- 0
70	9	10	0	32.542	11.6	145- 0
70	9	11	0	32.515	11.7	144-57
70	9	12	0	32.541	11.8	144-58
70	9	13	0	32.541	12.0	144-51
70	9	14	0	0.000	14.1	144-57
70	9	15	0	32.531	11.9	145- 7



SURFACE TEMPERATURE AND SALINITY OBSERVATIONS  
(P-70-7)



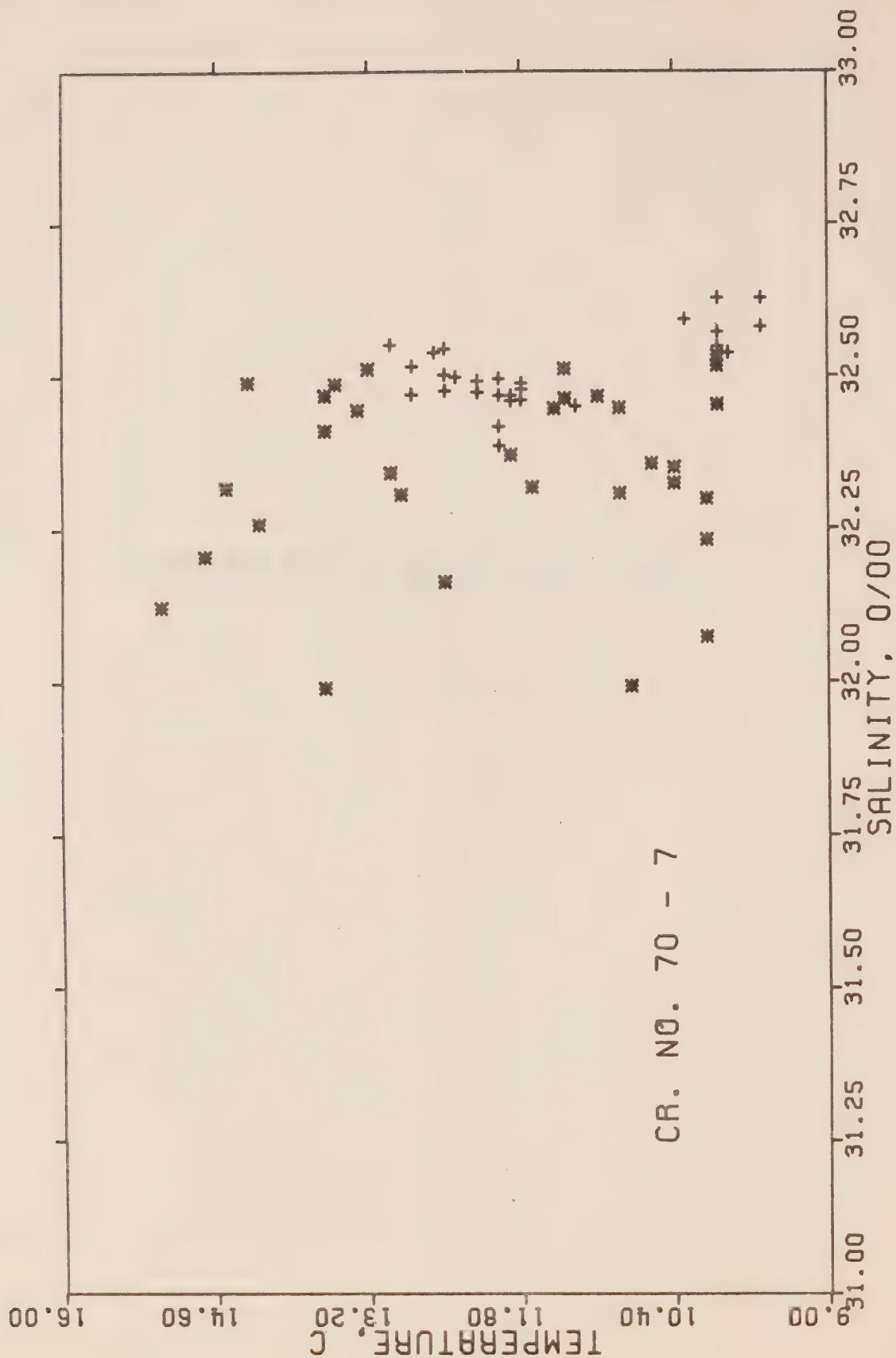


Figure 8 T-S plot of surface temperature and salinity observations on Line P (asterisks) and at Station P (pluses) during Cruise P-70-7.

SURFACE SALINITY AND TEMPERATURE OBSERVATIONS  
CRUISE REFERENCE NUMBER 70- 7

DATE/TIME				SALINITY	TEMP	LONGITUDE
YR	MO	DAY	GMT	0/00	C	WEST
70	9	19	47	31.993	10.8	125-32
70	9	19	230	32.163	12.5	126- 0
70	9	19	455	31.989	13.6	126-40
70	9	19	830	32.120	15.1	127-40
70	9	19	1315	32.256	14.2	128-40
70	9	19	1715	32.202	14.7	129-40
70	9	19	2030	32.315	14.5	130-40
70	9	20	45	32.488	14.3	131-40
70	9	20	403	32.409	13.6	132-40
70	9	20	801	32.305	12.9	133-40
70	9	20	1105	32.443	13.3	134-40
70	9	20	1508	32.510	13.2	135-40
70	9	20	1820	32.485	13.5	136-40
70	9	20	2215	32.466	13.6	137-40
70	9	21	130	32.340	13.0	138-40
70	9	23	0	32.537	12.6	ON STATION
70	9	25	0	32.544	12.5	ON STATION
70	9	28	0	32.491	12.2	ON STATION
70	9	29	0	32.498	12.4	ON STATION
70	9	30	0	32.495	12.0	ON STATION
70	10	1	0	32.467	12.0	ON STATION
70	10	2	0	32.475	12.5	ON STATION
70	10	3	0	32.473	12.2	ON STATION
70	10	4	0	32.460	11.8	ON STATION
70	10	5	0	32.515	12.8	ON STATION
70	10	6	0	32.550	13.0	ON STATION
70	10	7	0	32.469	12.8	ON STATION
70	10	8	0	32.501	12.5	ON STATION
70	10	9	0	32.416	12.0	ON STATION
70	10	11	0	32.473	12.2	ON STATION
70	10	12	0	32.385	12.0	ON STATION
70	10	13	0	32.459	11.9	ON STATION
70	10	15	0	32.468	11.9	ON STATION
70	10	16	0	32.488	11.8	ON STATION
70	10	17	0	32.477	11.8	ON STATION
70	10	18	0	32.450	11.3	ON STATION
70	10	22	0	32.592	10.3	ON STATION
70	10	28	0	32.548	10.0	ON STATION
70	11	1	0	32.538	9.9	ON STATION
70	11	2	0	32.627	9.6	ON STATION
70	11	2	924	32.580	9.6	143-40
70	11	2	1350	32.628	10.0	142-40
70	11	2	2150	32.571	10.0	141-40
70	11	3	30	32.516	10.0	140-40
70	11	3	300	32.534	10.0	139-40
70	11	3	515	32.452	10.0	138-40
70	11	3	820	32.324	10.4	137-40
70	11	3	1100	32.350	10.4	136-40
70	11	3	1340	32.466	11.1	135-40

SURFACE SALINITY AND TEMPERATURE OBSERVATIONS  
CRUISE REFERENCE NUMBER 70- 7

DATE/TIME				SALINITY	TEMP	LONGITUDE
YR	MO	DAY	GMT	0/00	C	WFST
70	11	3	1340	32.466	11.1	135-40
70	11	3	1625	32.448	10.9	134-40
70	11	3	1830	32.307	10.9	133-40
70	11	3	2100	32.356	10.6	132-40
70	11	3	2350	32.463	11.4	131-40
70	11	4	240	32.446	11.5	130-40
70	11	4	500	32.511	11.4	129-40
70	11	4	740	32.317	11.7	128-40
70	11	4	1020	32.370	11.9	127-40
70	11	4	1252	32.231	10.1	126-40
70	11	4	1440	32.073	10.1	126- 0
70	11	4	1550	32.299	10.1	125-33



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